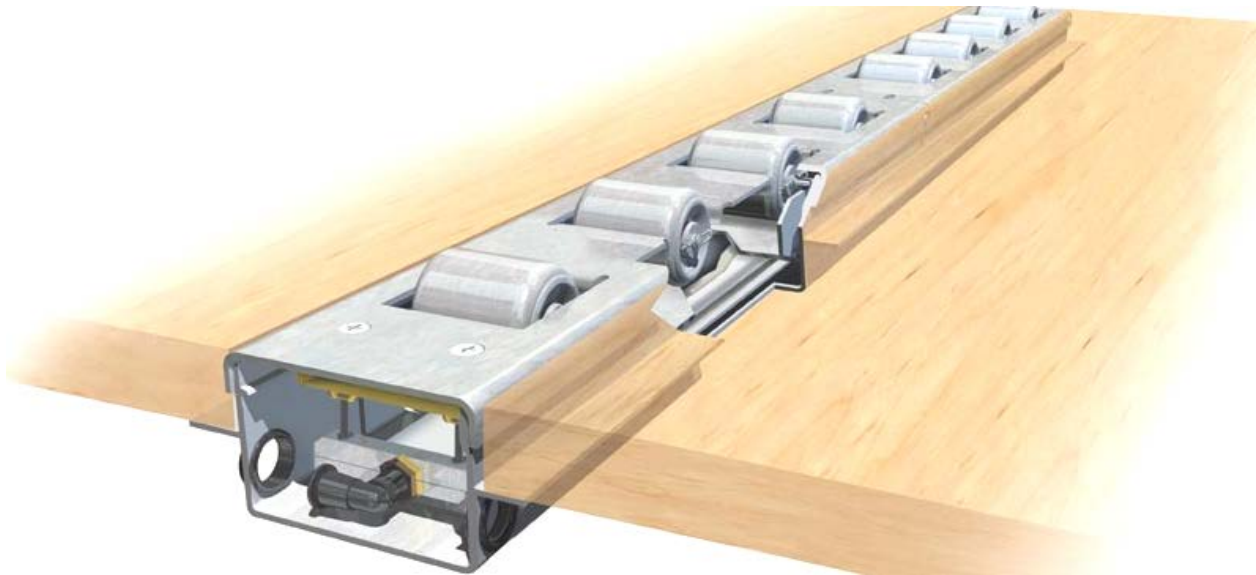


Installation Manual

RETRACT-A-ROLL® II



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Revision Level

Revision Level	Date
NC – Original	15 May 1999
1D	1 May 2000
1E	1 July 2001
1F	15 Feb 2011
G	25 July 2012
H	26 March 2020

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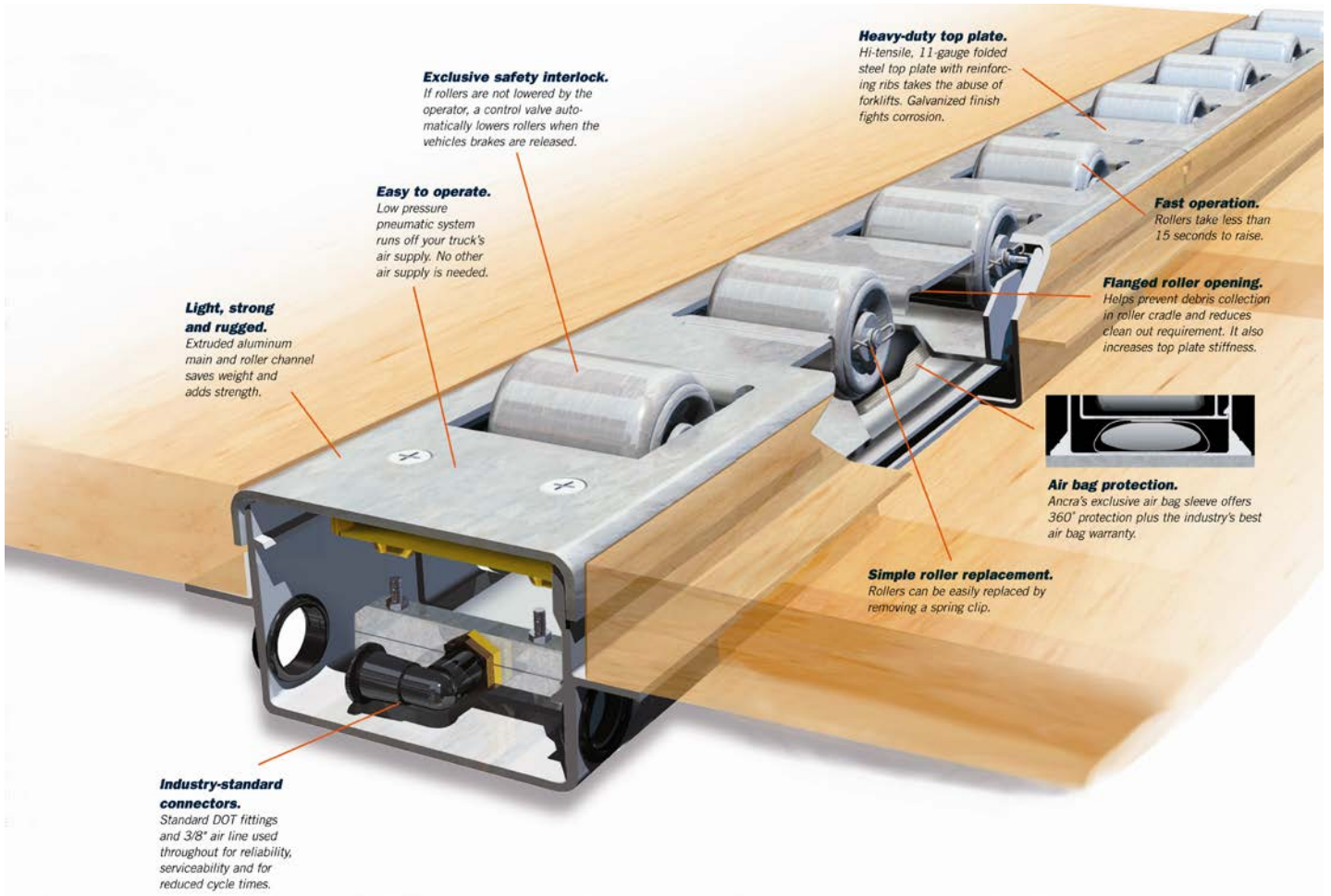
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Chapter 1 Quick Tour

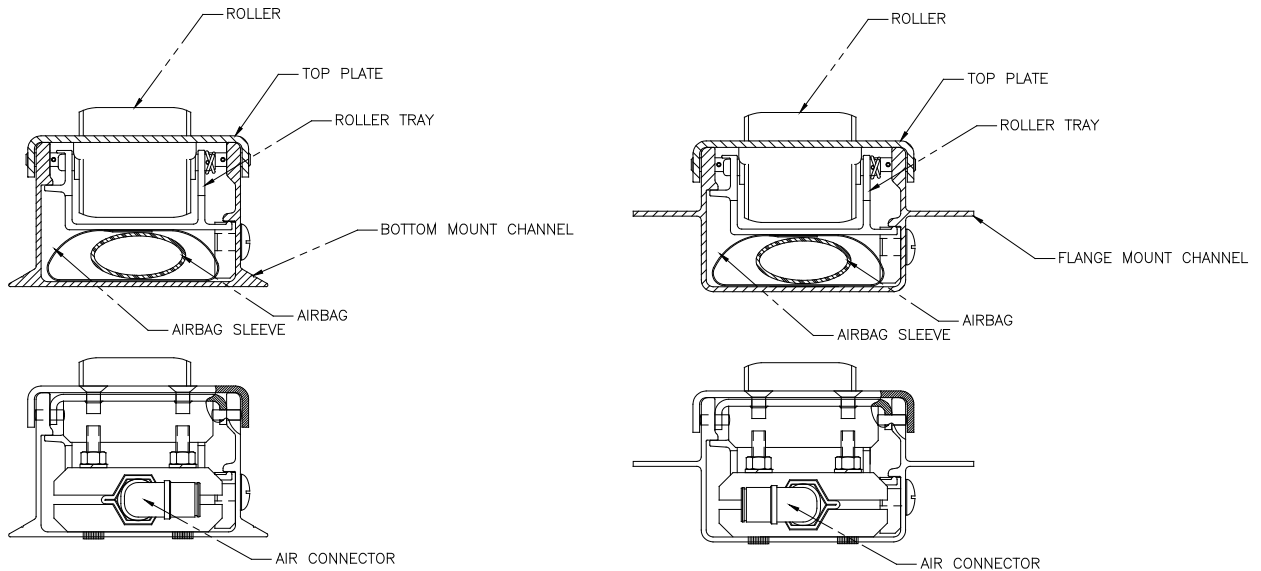
Figure 1-1 – RAR®II Conveyor



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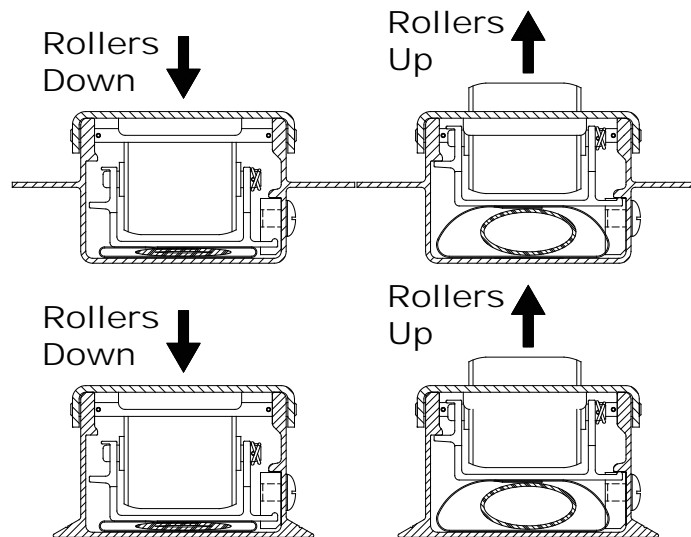
1.1 What is Retract-A-Roll® II?

Figure 1-2 – Typical RAR® II Conveyor



- Raise the rollers for loading and moving cargo without a forklift.
- Lower the rollers before transport.
- System attaches to the vehicle's air supply.

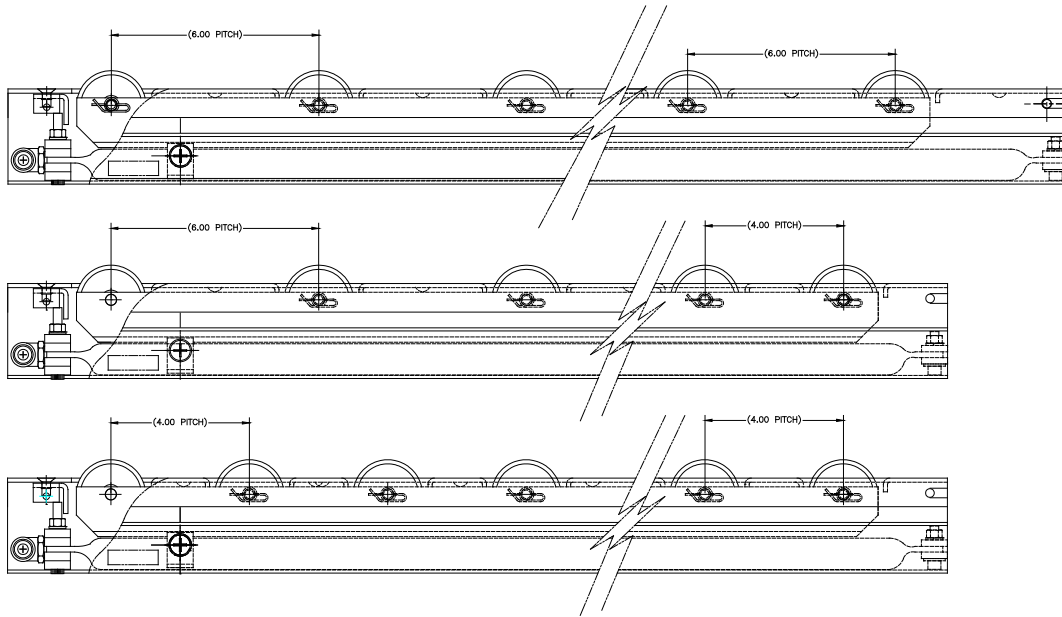
Figure 1-3 – Roller Operation



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1.2 System Overview

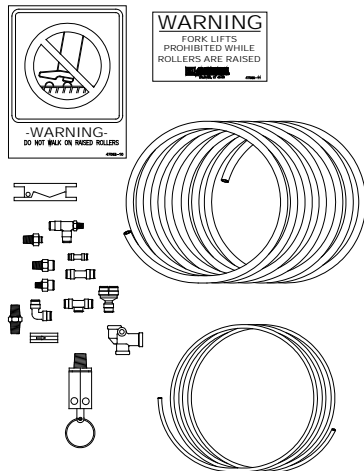
Figure 1-4 – Components



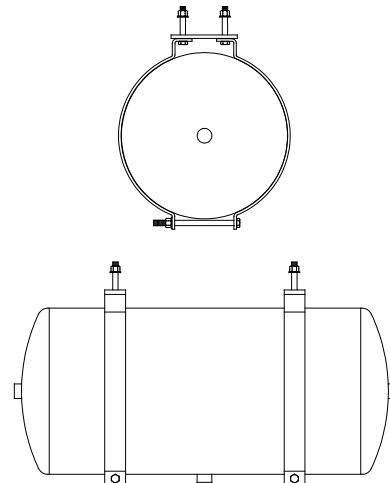
CONVEYORS



CONTROL
BOX



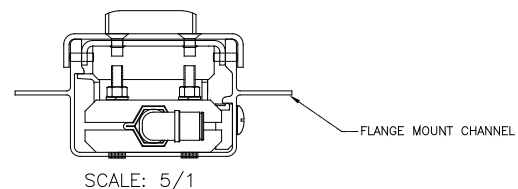
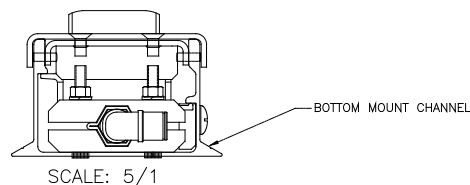
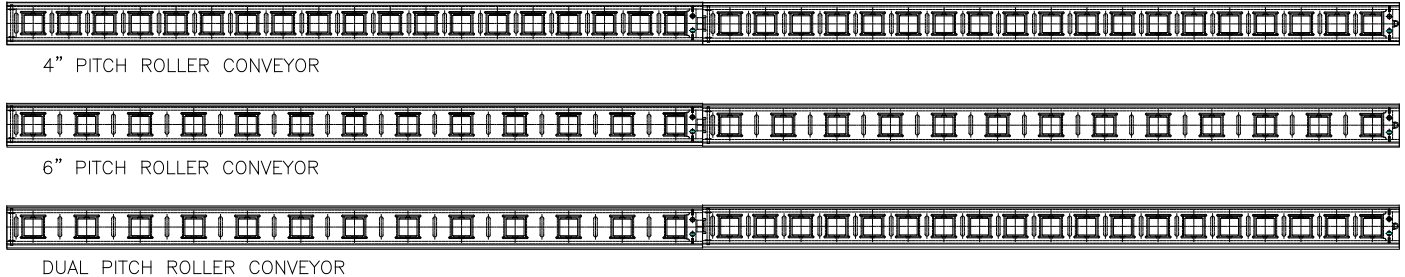
CONNECTION
KIT



AIR TANK KIT

Installation Manual

Figure 1-5 – Identifying Conveyor Types



1.3 System Operation

1. When the emergency brake is off or released position, air enters the R-A-R system.
2. When pressure is built up, the PPV valve allows air to enter the air tanks.
3. The air tanks charge up to 100 ± 5 psi.
4. When the air tanks are full, set the emergency brake in the on position.
5. The pressure gage inside the control box should read 30 ± 5 psi, system is not field adjustable.

WARNING

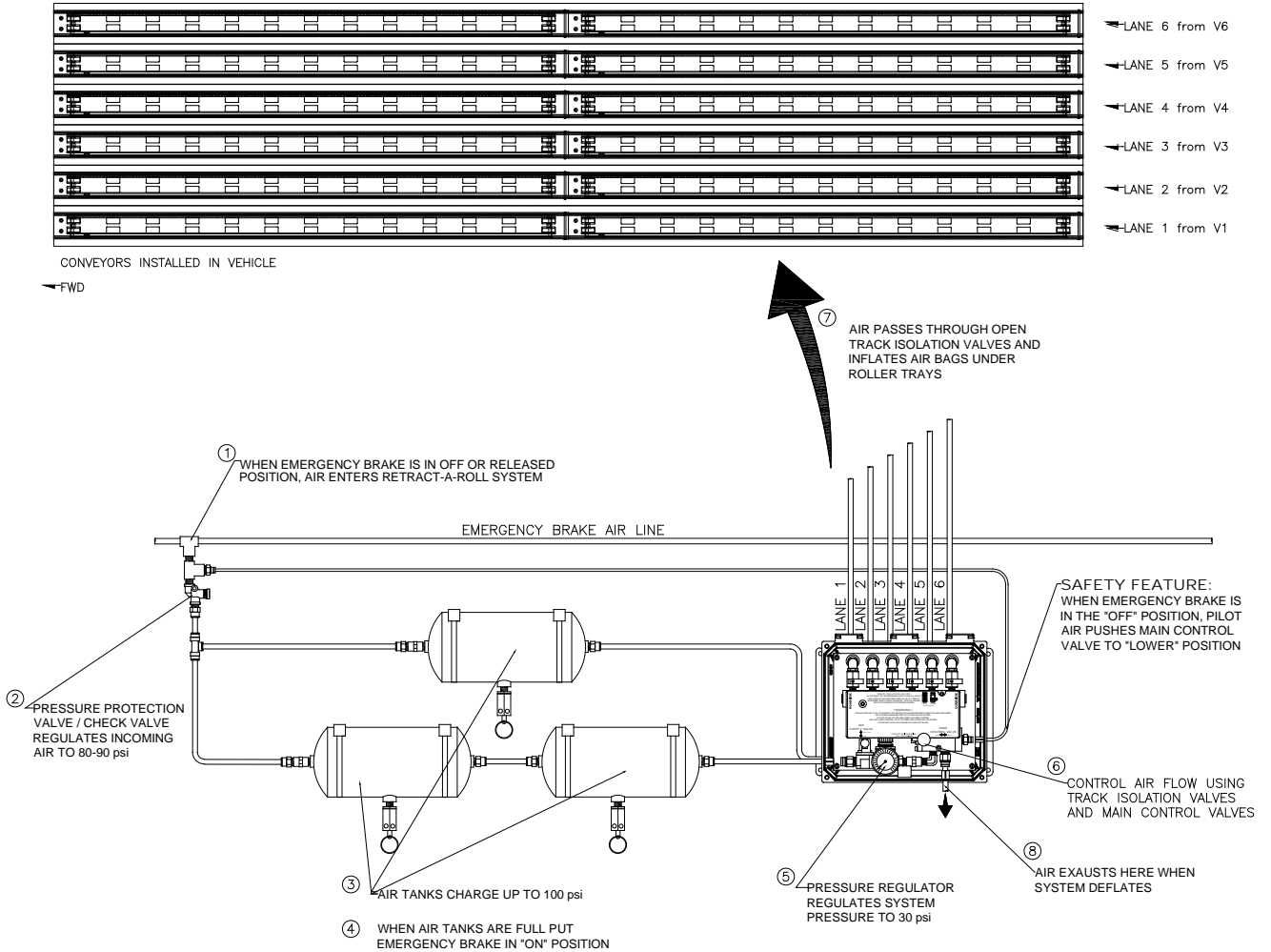


Retract-A-Roller system pressure above 35 psi can cause system failure and severe personal injury.

6. Begin airflow to operate floor system by using the main control valve inside the control box.
7. Air passes through the open isolation valves and inflates and raises the rollers.
8. When finished, deactivate the system by using the main control valve inside the control box.
9. Air will exhaust under the control box and the system will deflate.

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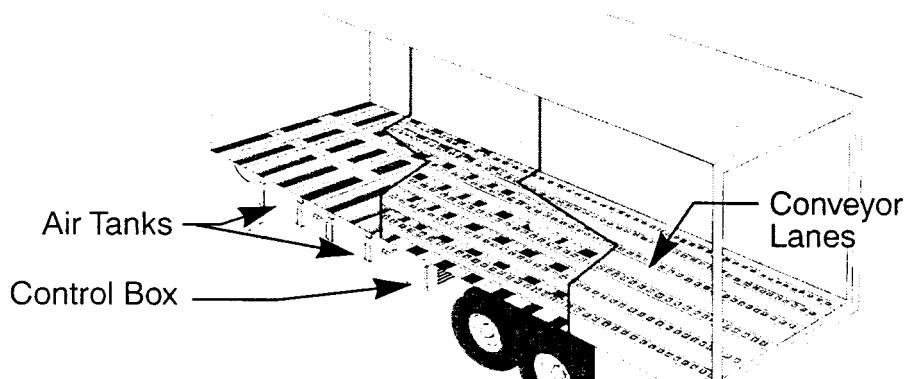
Figure 1-6 – System Operation



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Chapter 2 Planning the Installation

Figure 2-1 – System View



Plan a successful installation by following these guidelines.

2.1 Suggested Installation Sequence

Most components can be installed at the same time. Tasks are divided into chapters for readability.

- Chapter 3: Installing Conveyors and Decals.
- Chapter 4: Installing System Control Kit, Air Tank Kits, and Fittings Kit.
- Chapter 5: Inspecting for Proper Installation and Operation.

Before starting work, Supervisors should read instructions all the way through and understand requirements.

2.2 Selecting RAR II System Components

Define desired Retractable Roll® II application to include: vehicle/trailer dimensions and floor construction; product/pallet size and weight. Then contact Ancra International Sales Representative for assistance in final system definitions, selecting required system components, and quoting and order placement. Retractable Roll® II System components part numbers are identified in the Illustrated Parts Lists in Chapter 6. For best results, and to avoid Warranty issues, Ancra recommends installing only new components and fasteners. When receiving a shipment from Ancra, immediately report damage and discrepancies to Ancra.

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2.3 Selecting the Fittings Kit

When ordering the system components select and order the applicable Fittings Kit (62023). There are several Fittings Kits available and can be ordered either in Kit form or separately to facilitate the installation. It can be ordered through your Ancra International Sales Representative. Parts are identified in the Illustrated Parts Lists in Chapter 6.

2.4 Installer Supplied Equipment

Ensure all installer supplied equipment and supplies are on hand prior to installation.

Table 2-1 – Checklist for Installer-Supplied Equipment

✓	Description
<input type="checkbox"/>	Drawings Vehicle Floor Assembly Drawing, from Vehicle Manufacturer, shows Retract-A-Roll®II and Installer-supplied parts.
<input type="checkbox"/>	Sub-Floor Bridge plates, track end supports. Steel shims (if floor is not level), Battens (wood beams), step shims (if required).
<input type="checkbox"/>	Fasteners Fasteners (Conveyors to vehicle). Fasteners (Brackets that attach connectors and air lines to vehicle, as required).
<input type="checkbox"/>	Air Supply (2) “T”-Fittings (connecting to vehicle air supply). (1) Adaptor: “T”-Fitting-to-1/4”-tube. (1) Adaptor: “T”-Fitting-to-Pressure Protection Valve (1/4”). (1) Pressure Gauge: 160 psi, 1-psi gradients (Leak Test). Pipe Tape (all connectors). Brackets (connectors and air lines to vehicle, as required).
<input type="checkbox"/>	Pallet Stops Purchase separately from Ancra.
<input type="checkbox"/>	Spacers Run Out Channels.
<input type="checkbox"/>	Shop Tools Including air compressor and pneumatic tools, welding equipment, linear measuring and marking tools, pressure-measuring tools, table saw for floorboards.
<input type="checkbox"/>	Supplies Caulking, Tape, Touch-up paint, Undercoat.
<input type="checkbox"/>	Safety Make sure that all proper safety equipment is provided and safety procedures are followed.

2.5 Inspecting the Vehicle

Before installing Retract-A-Roll®II, carefully inspect the vehicle and auxiliary systems. Make repairs as required. Road-worthiness is the responsibility of the Owner and Vehicle Manufacturer.

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Chapter 3 Installing Conveyors and Decals

CAUTION: Do not remove plastic tape from tops of Conveyors until installation is complete. Tape protects conveyors and roller trays during installation and from installation debris.

RECOMMENDED: Install Mylar tape on the bottom of the main channel to prevent corrosion between the conveyor and the cross members.

3.1 Preparing Vehicle Interior

Ancra recommends that the Installer carefully inspect the vehicle interior. Modifications may be necessary for proper fit and support of Retract-A-Roll®II. Table 3-1 below, lists recommendations, however, it is not designed to be a complete list. Road-worthiness is the responsibility of the Owner and Vehicle Manufacturer.

CAUTION: Prior to any welding, protect installed Track and Components from any welding debris that will damage components.

Table 3-1 – Check List for Preparing Vehicle Interior

- ✓ **Recommended Specification ***
-
- Structural cross members and shims are level with each other and within manufacturer's specifications.
-
- Floor boards and sub-floor build-up, at each module, will not be lower than 2 ¾" (+3/32") – the height of the Conveyors with the rollers in the down position.
-
- Conveyors are attached a minimum of three times per side (each end and center).
-
- Connection Kit is installed and air system is working properly (Chapter 4).
-
- Vehicle sub-floor is continuous, or, undercoating is used (recommended).
-
- Shims are attached to cross members.
-
- System arrangement matches drawings.
-
- Clearances around components are consistent with Figures 3-3 and 3-6.
-
- A structural cross member or support plate is under each end of every Conveyor AND structural cross members are spaced under each conveyor at a maximum center-to-center distance of every 12".
-
- Obtain all required approvals.

* The following paragraphs contain details about the checklist.

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3.2 Inspecting Floor Height

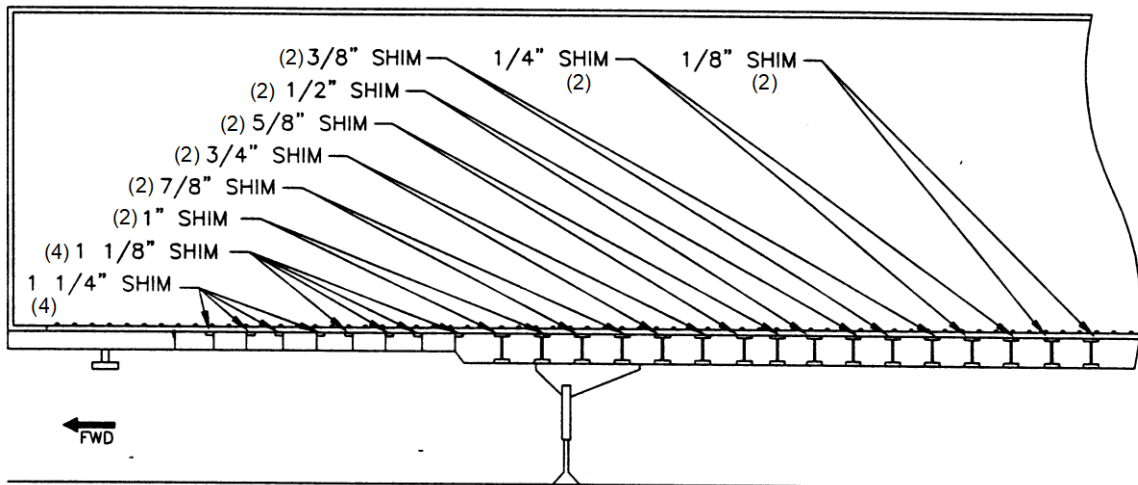
The vehicle floor and sub-floor build-up must not be lower than 2 ¾" (+3/32"), measuring from the top of the structural cross member to the top of the rollers in the down position. Refer to Figure 3-3. Building the finished floor lower than 2 ¾" will expose the Conveyors to excessive wear and will void the Warranty.

3.3 Inspecting for a Level Surface

Conveyors must be installed on a level surface. Make sure that cross members are level with each other and are within manufacturer's specifications. Weld metal shims to the cross members as required to conform to the flatness requirements. Weld in accordance with standard American Welding Society practices and instructions from the Vehicle Manufacturer. Do not attach shims to Conveyors.

Depending on the configuration of the trailer, the installation may require Step Shims if the unit has an exposed 5th wheel plate. Refer to Figure 3-1.

Figure 3-1 – Step Shims Installation



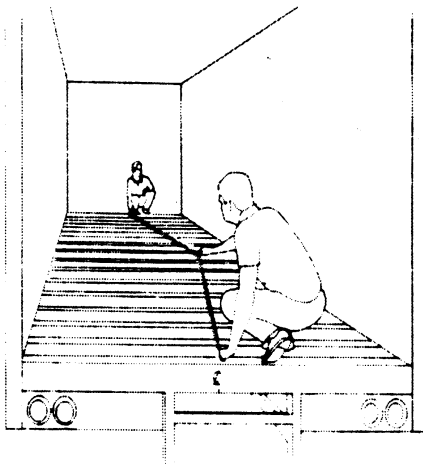
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3.4 How to Install Step Shims

1. Step Shims, are shims with thickness' ranging from 1 ¼" to 1/8" in 1/8" increments.
2. Starting immediately from the back of the raised 5th wheel plate flange, place (4) 1 ¼" thick shims on top of each and every cross member for the first (4) positions.
3. After the (4) 1 ¼" shims are positioned, place (4) 1 1/8" shims on top of each and every cross member for the next (4) positions.
4. After the (4) 1 1/8" shims are positioned, place the remaining shims on top of each and every cross member (by 2's) starting with (2) 1" shims and decreasing to the last (2) 1/8" shims. **DO NOT SKIP ANY CROSS MEMBERS.** Refer to Figure 3-1, for placements.
5. Secure all shims to cross members before proceeding further.
6. Use 3 ½" long floor screws to secure the floor boards starting from the rear of the trailer and working your way towards the front, up to and including the position of the (2) ½" thick shims.
7. Use 5" long floor screws to secure the floorboards starting from and including the position of the (2) 5/8" thick shims and working your way towards the front of the trailer, up to and including over the 5th wheel plate.

3.5 Configuring the Conveyor Lane Spacing

Figure 3-2 – Center Line



Ancra recommends spacing the Conveyor Lanes to provide even load distribution.

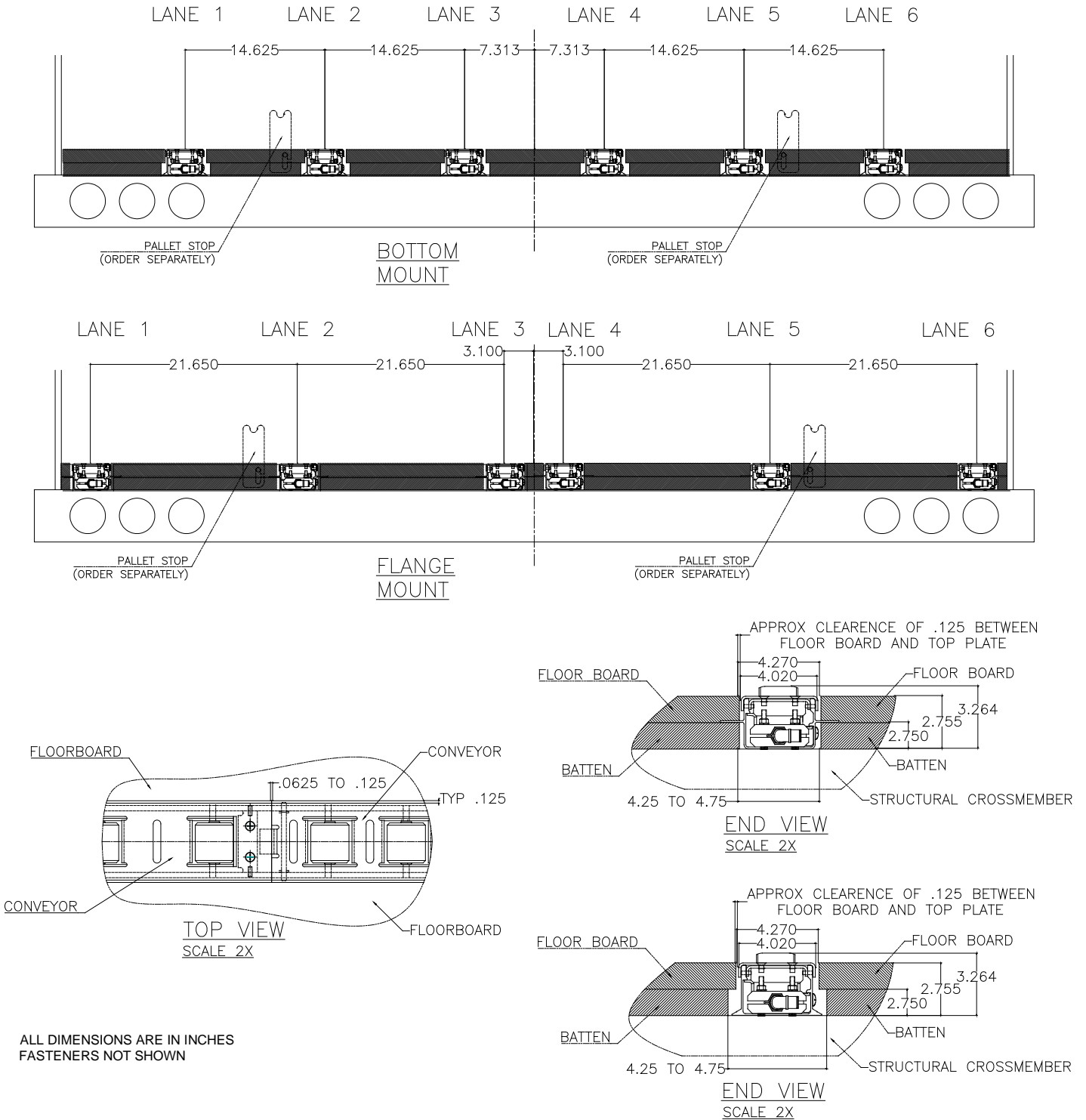
Figure 3-3, shows examples of proper lane spacing for a (6) Lane System.

To figure the lane spacing, measure the inside width of the vehicle at each end of the vehicle. Measure the inside width of the rear door opening and the inside width at the front bulkhead.

Mark the centerline by snapping a chalk line. Using the centerline, measure and mark the centerline of each conveyor.

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Figure 3-3 – Examples of Clearances – (6) Lane Systems

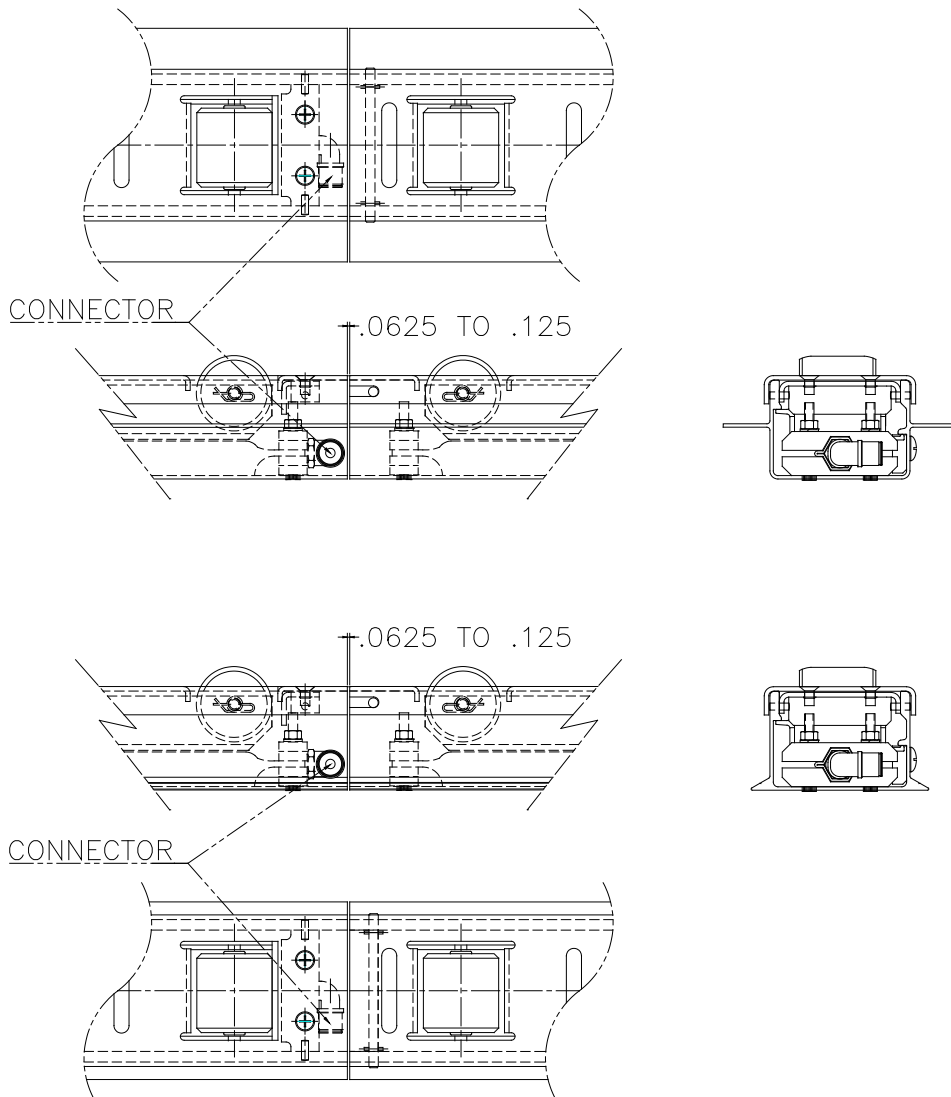


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3.6 Aligning Conveyors

After marking the Conveyor Lanes, place Conveyors down the center of each lane. Start with Conveyors at the tailgate, or rear, of the vehicle and work forward, towards the front. Place the first Conveyor (Combo) a maximum of ¼” from the inside edge of the rear sill. The differences between the conveyor types are shown in Chapter 1. Push Conveyors together with a gap of 1/16” to 1/8” between Conveyors. The gap allows the cover plates to pivot in and out of the channel when service components inside the assembly during maintenance. Clearances are shown in Figure 3-3. As shown in Figure 3-4, make sure that the Conveyors are lined up with connections in the proper direction. The elbow fittings on the air bag assemblies may need to be rotated 180° to allow for proper air connection.

Figure 3-4 – Aligning Connectors



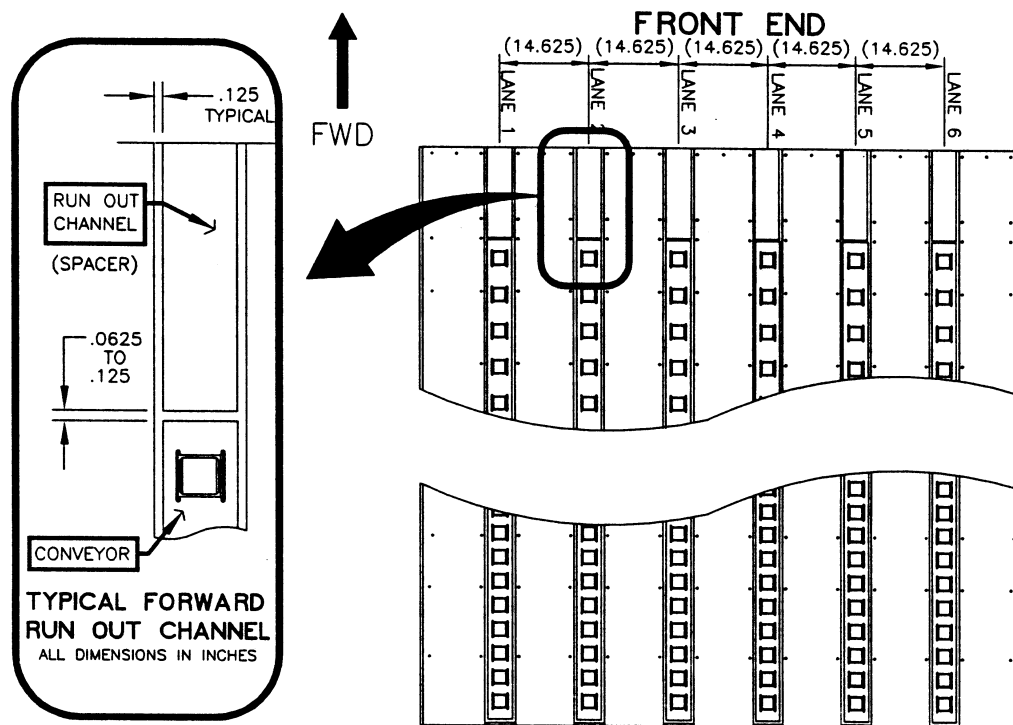
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3.7 Making Run Out Channels

Run Out Channels (Spacers) protect the ends of the Conveyors from dirt and damage at the front of the trailer. Determine the size of Run Out Channel by measuring the distance at the front of each Lane, from the end of each Conveyor to the bulkhead.

DO NOT – Attach Run Out Channels to Conveyors.

Figure 3-5 – Example of Run Out Channels



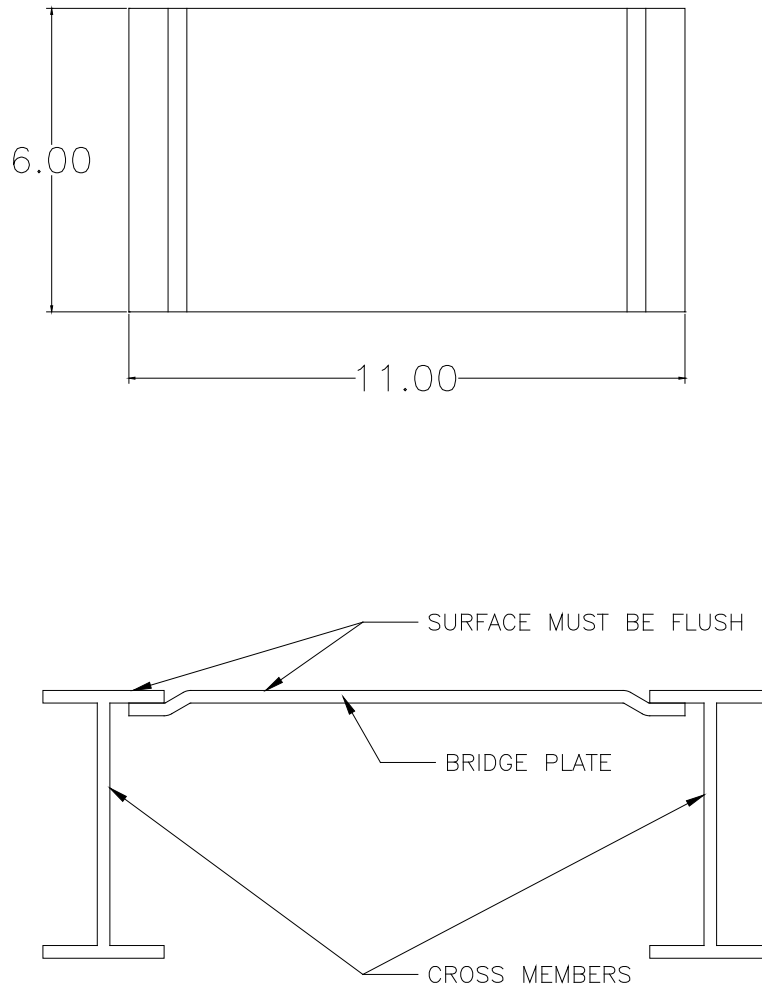
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3.8 Making and Installing Bridge Plates

There must be a structural member under each end of each Conveyor section. And, there must be structural cross members spaced under each Conveyor at a maximum center-to-center distance of every 12". If not present, install a steel Bridge Plate or structural cross member under Conveyors as required. The Bridge Plate is constructed out of an 11" x 6" piece of 10 gauge steel. The ends must be bent to match up with the bottom side of the trailer cross members top flange so that top of the Bridge Plate is flush with the surrounding structure. Weld Bridge Plates to cross members in accordance with standard American Welding Society practices and instructions from the Vehicle Manufacturer.

DO NOT – Attach Structural Supports to Conveyors.

Figure 3-6 – Bridge Plate



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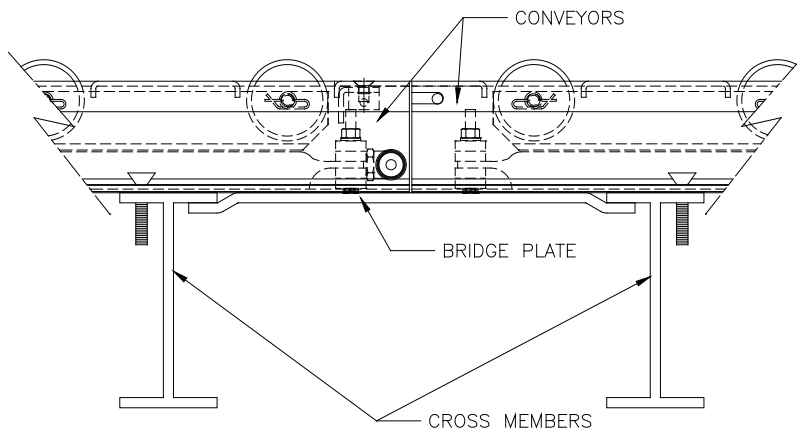
3.9 Attaching Conveyors

NOTE: Before attaching the Conveyors, install and inspect the Control Box, Air Tanks, and Connection Kit. Instructions are provided in Chapters 4 and 5.

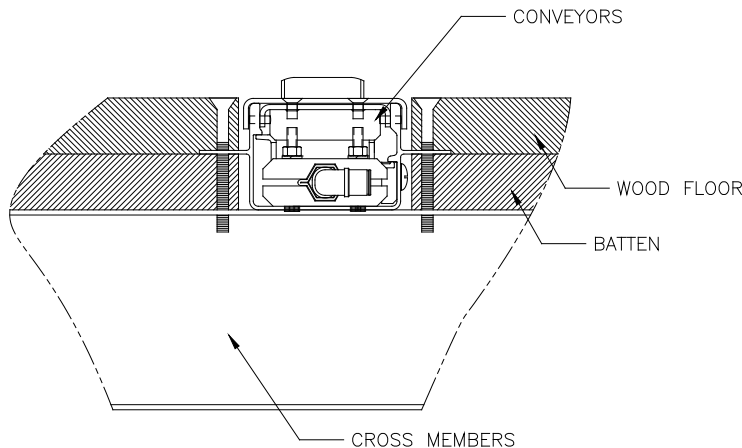
Place the Conveyors and Run Out Channels on the Cross members. It will be necessary at this time to cut (6) 1 3/8" thick shims per track module in order to fasten the Conveyors to the cross members. They will be placed one each side of each Conveyor at each end and in the center. Fasten the Conveyors a minimum of three times per side (each end and center), fasteners are provided by the Installer. A tight grip is required between the shims and conveyor flanges. Depending on the plumbing arrangement, a 3/8" gap may be required between the curbside of the Conveyors and the shims in order to run the airlines.

Refer to Figure 3-3 for clearance and Figure 3-4 for alignment of conveyors.

Figure 3-7 – Attaching Conveyors



BOTTOM
MOUNT



FLANGE
MOUNT

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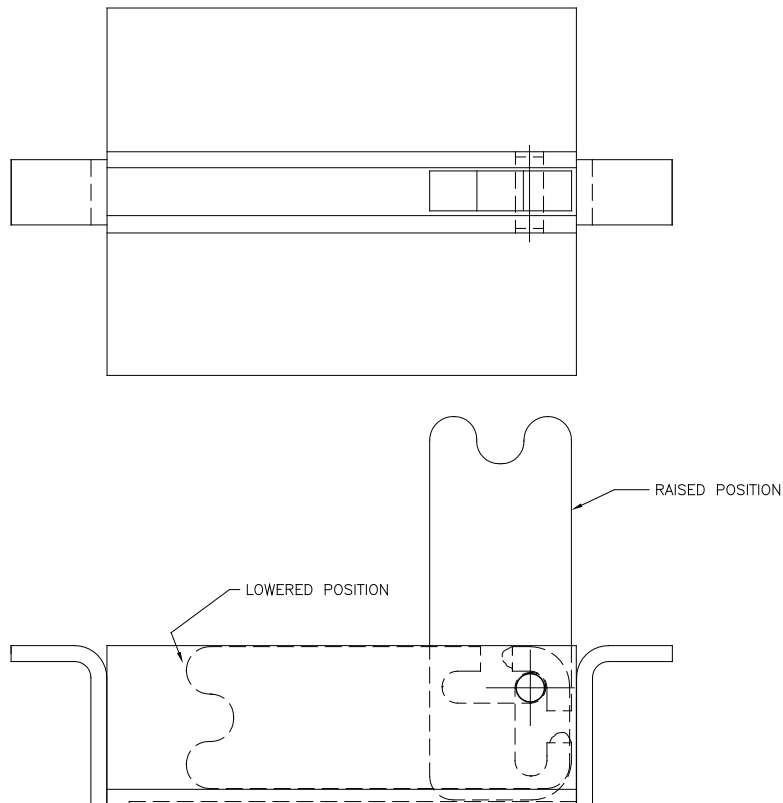
3.10 Installing Pallet Stops, 62036-10

Figure 3-8 – Pallet Stops



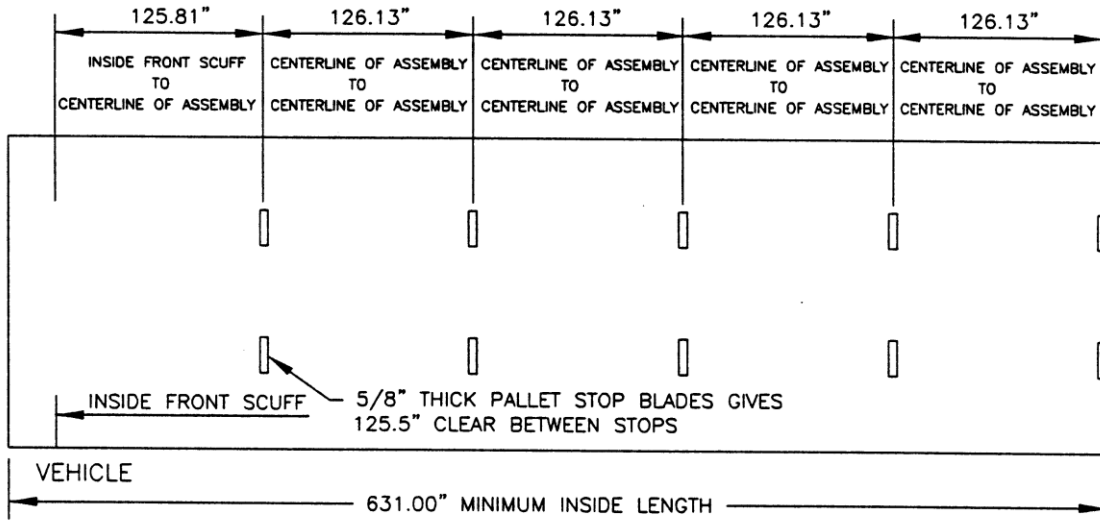
Pallet Stops are sold separately, and are available through your Ancra Material Handling Systems Sales Representative. Refer to Figure 3-8, for a guide to spacing the Pallet Stops. Fillet-weld Pallet stops to structural cross members and/or installed Bridge Plates per American Welding Society standards and instructions from the Vehicle Manufacturer.

Figure 3-9 – Pallet Stops, 62036-10

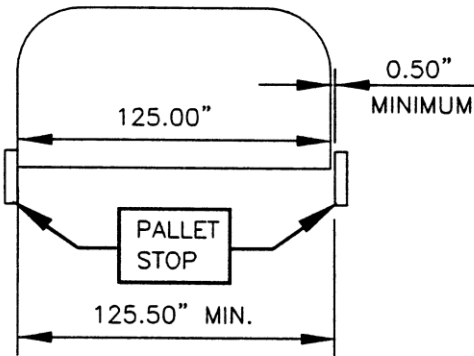


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Figure 3-10 – Spacing for Pallet Stops



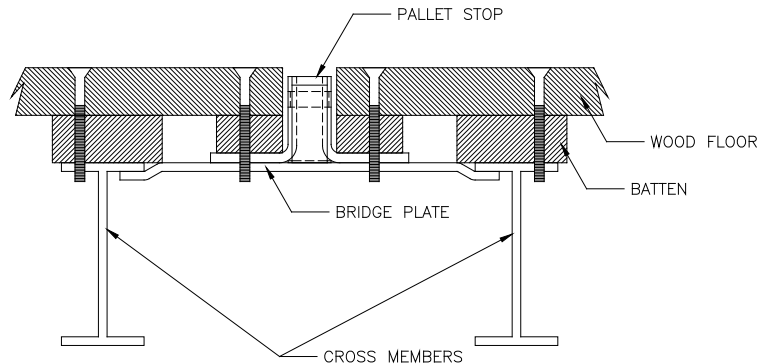
HOW TO CALCULATE PALLET STOP SPACING



SIDE VIEW
TYPICAL AIRFREIGHT CONTAINER/STOP

1. MEASURE THE INSIDE OF THE VEHICLE, FROM THE INSIDE OF THE FRONT SCUFF TO THE INSIDE OF THE REAR DOOR. (631" MINIMUM REQUIRED FOR FIVE CONTAINERS AND FIVE PALLET STOPS)
2. 125.00" AIR CONTAINER LENGTH
 + .50 SPACE
 + .625 PALLET STOP BLADE THICKNESS
 126.125 EACH
 X 5 CONTAINERS
 630.625"
 + .375 CLEARANCE BETWEEN REAR EDGE OF REAR STOP AND INSIDE OF REAR DOOR
3. IF THE TRAILER HAS LESS THAN 631" USEABLE INSIDE CLEARANCE, THE DISTANCE BETWEEN CONTAINERS AND PALLET STOPS MAY BE REDUCED FROM 1/2" TO 1/4" IF NECESSARY.

Figure 3-11 – Installing Pallet Stops

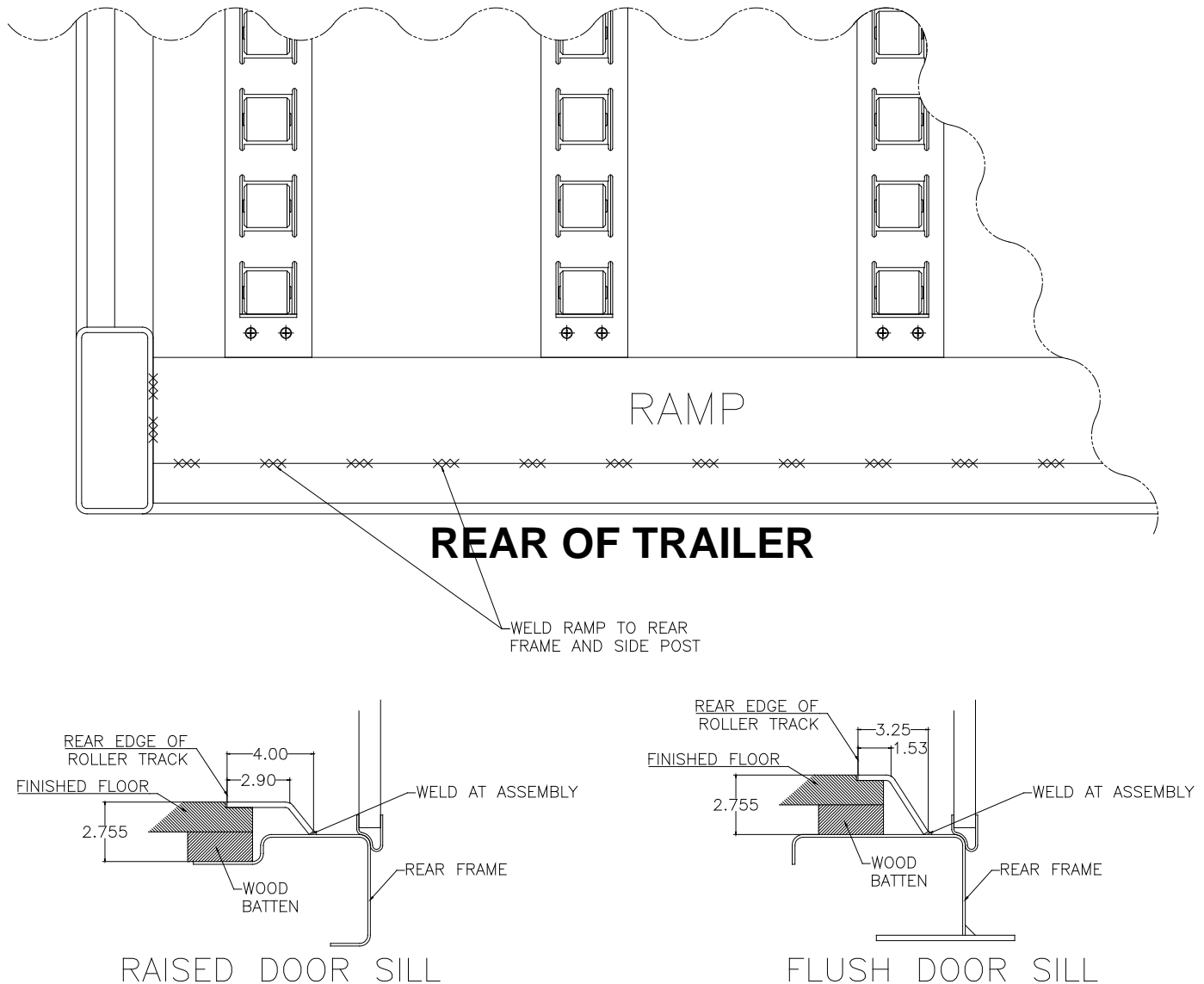


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3.8 Making and Installing Rear Ramp

The Rear Ramp guides the cargo toward the conveyors and protects the conveyor at the rear doorsill. The Rear Ramp must be welded to the Rear Frame.

Figure 3-12 – Making and Installing Rear Ramp



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3.11 Attaching Battens

Ancra recommends installing Battens (short pieces of wood) under the flanges of the Conveyors at every cross member to support the floorboards. The length of each Batten will depend on the Conveyor Lane spacing used. Measure the distance from Conveyor to Conveyor (underneath the flange or wing). Take that measurement and subtract 3/8" for the airline tubing (depending on plumbing arrangement) to acquire the proper Batten length. Attach the Battens to the structural cross members of the vehicle. The Battens can be attached by any means so that they do not fall out or spin during the drilling and installation of the floor screws. Nailing or caulking the Battens in place, are some acceptable forms of attachment. Battens and clearances are shown in Figure 3-3. Make sure that the Battens will not exceed the floor height requirements in paragraph 3.2. Depending on the configuration of the trailer, the installation may require Step Shims if the unit has an exposed 5th wheel plate. Refer to paragraph 3.3.

3.12 Painting the Vehicle Interior

Before painting the vehicle interior, make sure that the Conveyors are completely covered. Paint will damage the rollers and may void Warranty.

3.13 Installing Warning Decals

After painting the vehicle interior, install the Warning Decals on the sidewall near the tailgate, approximately 5' up from the vehicle floor, or at eye level. Before installation, make sure that the sidewall is clean and dry. It may be necessary to apply the Decals to a thin clean piece of aluminum and attach it to the sidewall of the trailer. Normal position is on the roadside rear of the vehicle. Make sure that the decals are securely attached.

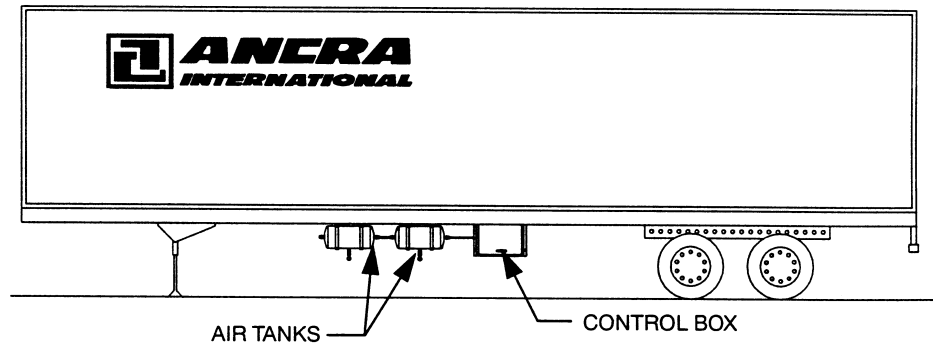
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Chapter 4 Installing System Control Box, Air Tank Kits, Connection Kit

4.1 Recommended Locations

Ancra recommends installing the System Control Kit (Control Box) and Air Tank Kits on the Driver's side of the vehicle, forward of the wheels, at the locations shown in Figure 4-1.

Figure 4-1 – Kit Locations



PICTORIAL REFERENCE

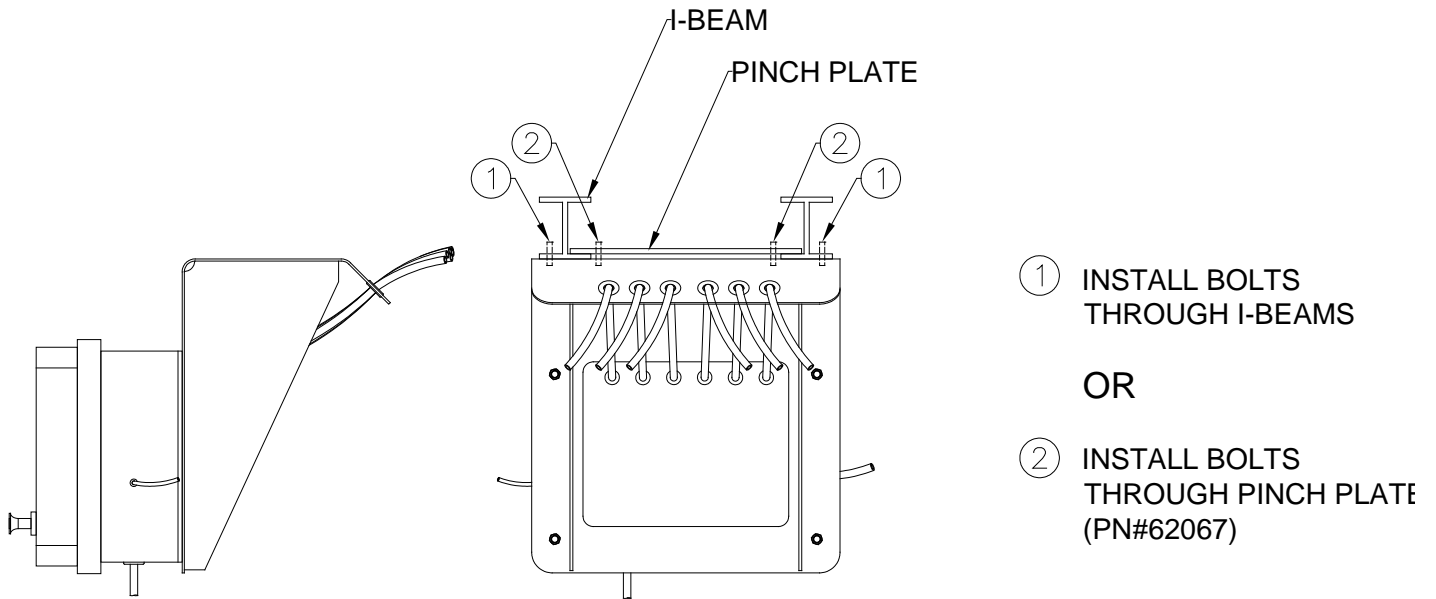
Common location of the Control Box and Control Box Mounting Bracket is the first pair of cross members aft of the center side marker light. Common location of the Air Tanks, and Air Tank Kits are the first pair of cross members forward of the center side marker light for the first tank. Skip a pair of cross members, then install the second Air Tank forward of the first tank, as shown in Figure 4-1.

Installation Manual

4.2 Installing System Control Box

The System Control Box attaches to an optional Bracket (62063). Refer to Figure 4-2. The bracket must attach to a minimum of two structural cross members. The Bracket should be recessed underneath the trailer approximately 14" from the sidewall to the surface of the Bracket. This will allow some protection to the Control Box from side impact. Ancra suggests that the Installer build protection for the Control Box from wheel water spray and road debris. Install the mounting bracket assembly to the cross members in accordance with instructions from the Vehicle Manufacturer. Install the Bracket by either utilizing the Pinch Plates provide as part of the Installation Kit or by welding the bracket in place. Weld the bracket assembly to cross members in accordance with American Welding Society standards and instructions from the Trailer Manufacturer. **Make sure that the bracket is securely attached.** Install the Control Box so the lid opens **UP**. Fasteners are provided in the applicable Installation Kit. (62063).

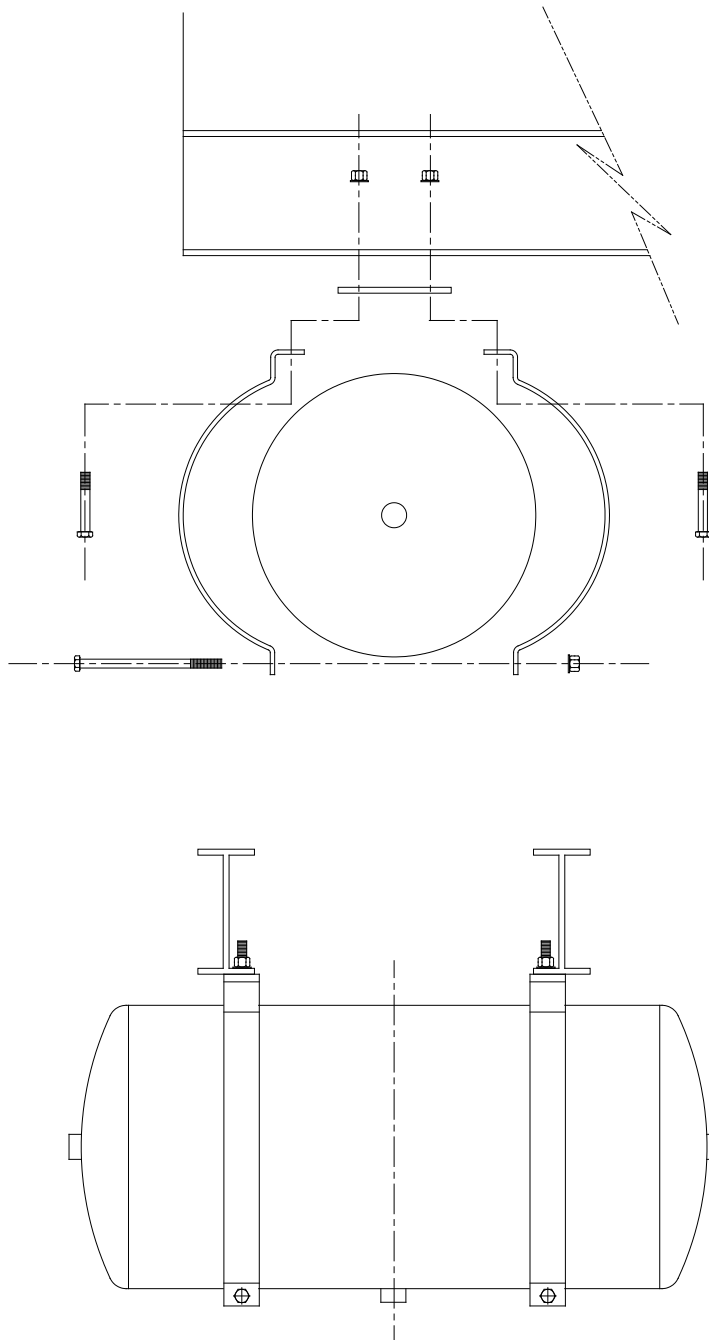
Figure 4-2 – Control Box Installation Bracket



Installation Manual

4.3 Installing Air Tank Kits

Figure 4-3 – Air Tank Mounting



Using hardware provided with the Air Tank Kits, fasten the Air Tanks to a minimum of two structural cross members as show in Figure 4-3. The air tank drain should be facing down

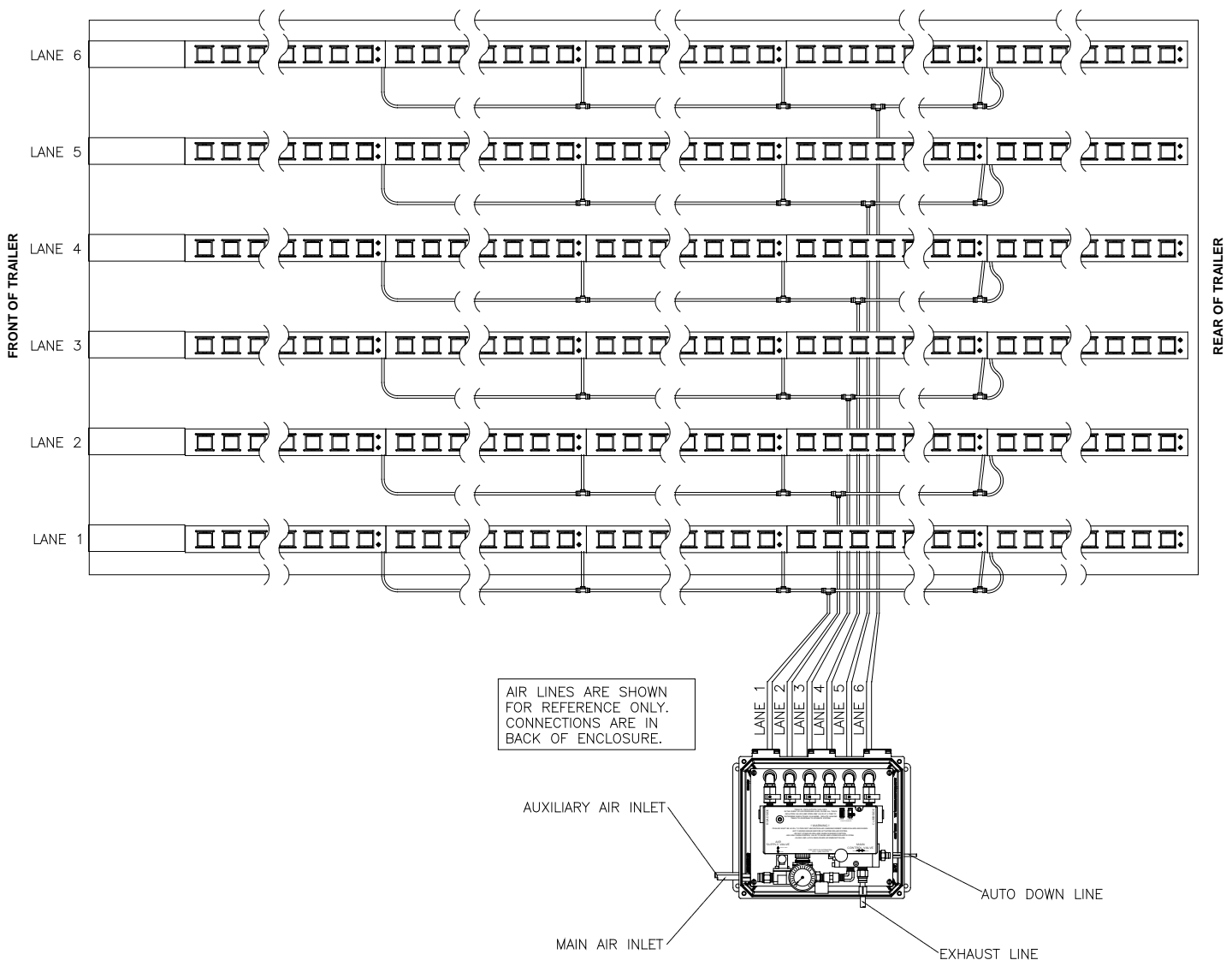
Installation Manual

to allow proper operation and maintenance of the system. Make sure that the tanks are securely attached.

4.4 Connecting Air Lines

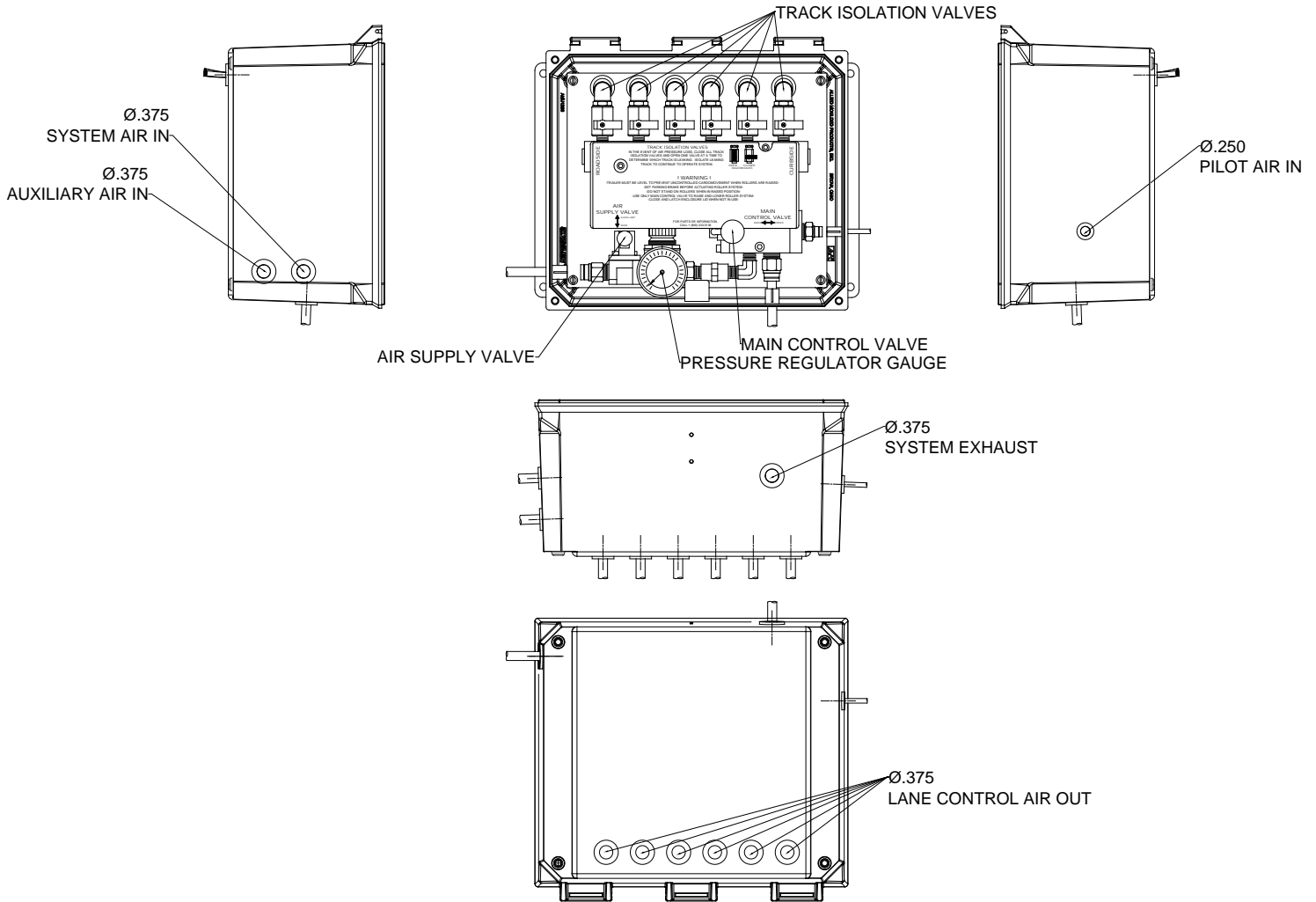
Route all air tubing from the Conveyors back to the Control Box. Before attaching, make sure that each track isolation valve in the Control Box will connect to the proper Conveyor Lane. Normal assignments are from left to right for both the Control Box isolation valves and Conveyor Lanes, from left to right 1, 2, 3, 4, 5, and 6. The recommended arrangement is shown in Figure 4-4.

Figure 4-4 – Valves and Lanes



Installation Manual

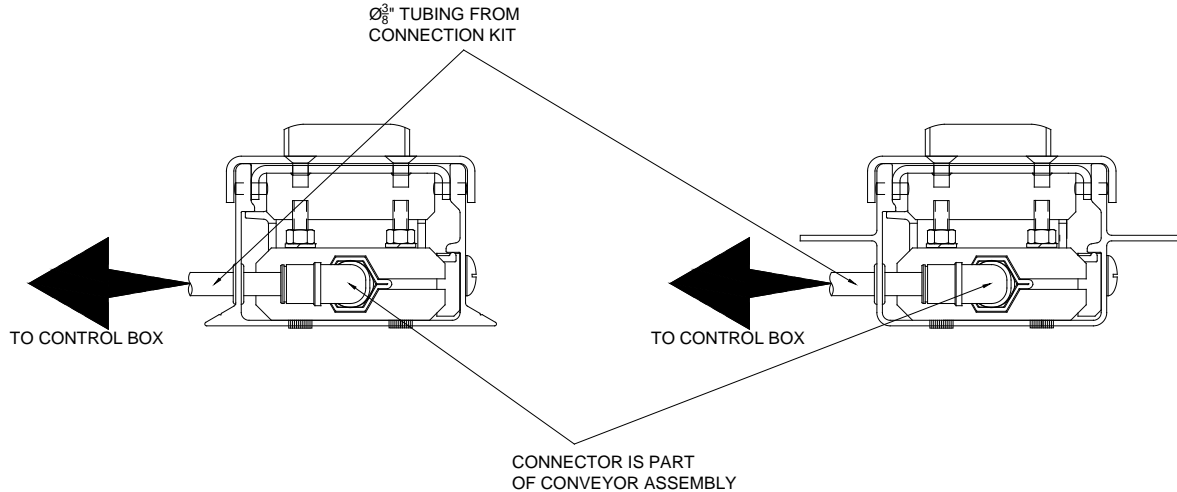
Figure 4-5 – Connecting to Control Box



NOTE: Make sure that Conveyors are positioned with the connector facing the proper direction. Refer to Figure 3-5.

Installation Manual

Figure 4-6 – Connecting to Conveyors (Cross-section)



NOTE: Components of the Connection Kit are shown in Figure 4-9.

NOTE: Part Numbers are provided in Chapter 6.

NOTE: Before installing fittings, review the installation tips in Table 4-1 below.

Table 4-1 – Tips for Fittings Kit

- ✓ **Recommended Procedure**
- Before installing, make sure that tubing and fittings have nothing inside them.
 - To prevent leaks, use a tube cutter to make a clean, square cut. **DO NOT USE** a razor blade knife or a straight edge knife. A tube cutter is provided in the Fittings Kit. Refer to Figure 4-7.
 - To prevent leaks, make sure that all tubing is fully installed into fittings. Refer to Figure 4-8.
 - All tubing must be secured to vehicle. Do not let it droop down or swing. Clips and fasteners are provided by the Installer
 - Make sure that all connections are secure. Use pipe tape to seal threaded pneumatic fittings, pipe tape is provided by the Installer.
 - To prevent leaks or slow operation of the system, **DO NOT ALLOW KINKS OR SHARP BENDS** in tubing.

Installation Manual

Figure 4-7 – Using Tube Cutter

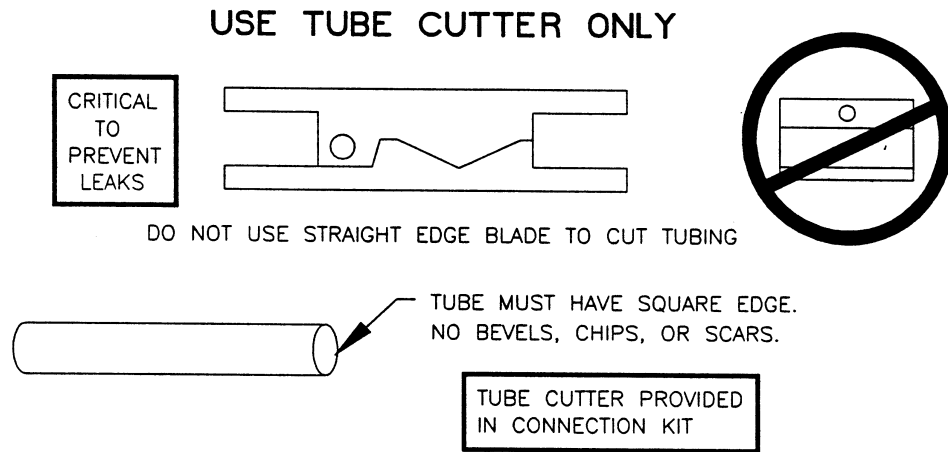
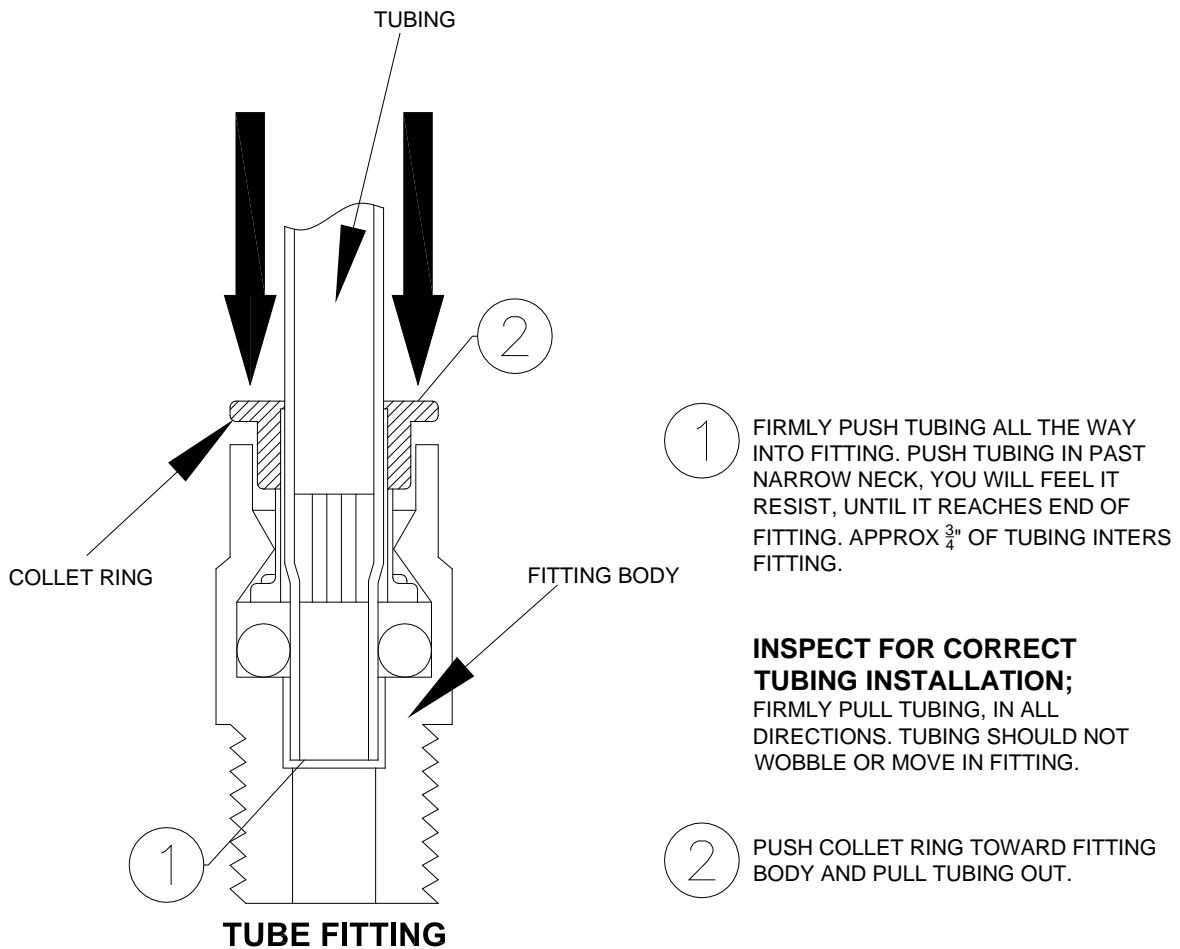
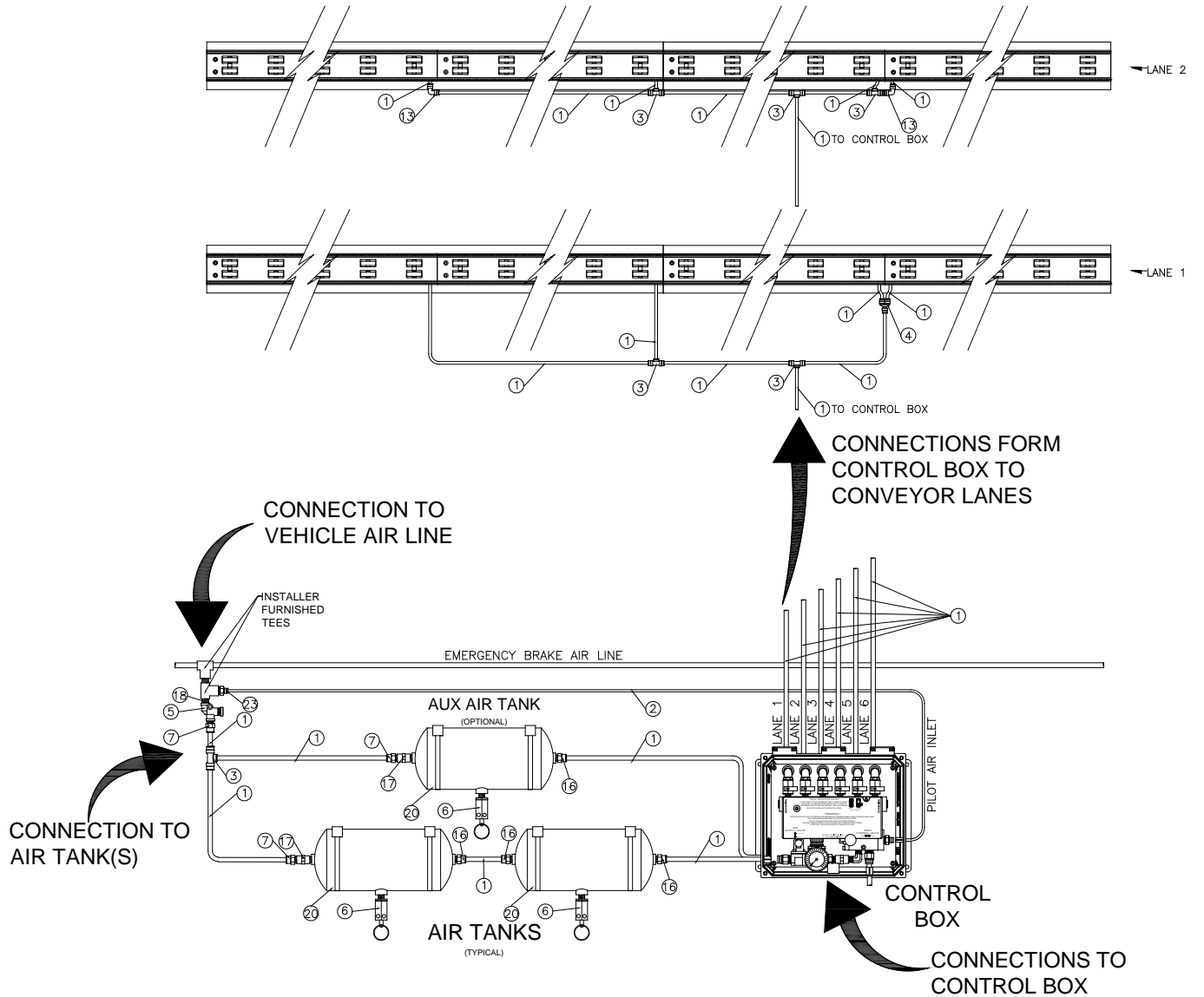


Figure 4-8 – Installing Tubing in Fittings



Installation Manual

Figure 4-9 – Installing Fittings



Part Numbers listed in Chapter 6

Installation Manual

4.5 Connecting to Vehicle's Air Supply

WARNING



Before starting work, make sure that the Emergency Brake System is disconnected.

WARNING



Perform work in accordance with all local, state, and Federal regulations. Road-worthiness is the responsibility of the Owner / Operator.

Connect the Retract-A-Roll®II system to the Emergency Brake Line using fittings provided by the Installer. Attach the appropriate "T"-connectors and an adaptor attaching the "T"-connector to the pressure protection valve. Installation locations are shown on Figure 4-9.

4.6 Inspecting System

Before installing the floorboards, Ancra recommends inspecting the Retract-A-Roll®II system. Perform the inspections in Chapter 5.

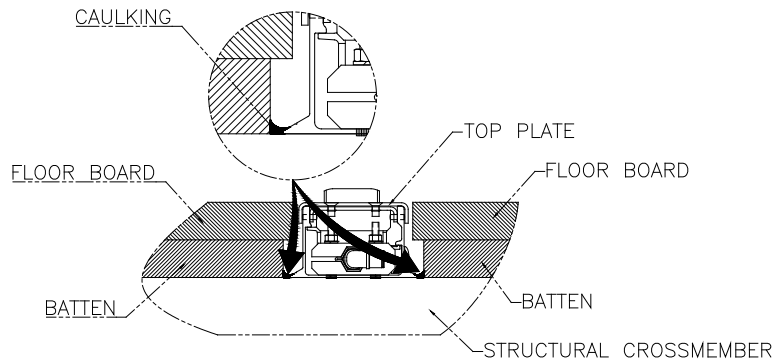
4.7 Applying Caulking and Undercoating

Ancra recommends applying caulking and undercoating to the Retract-A-Roll®II system. Make sure that the bottom of the floorboards, battens, and shims are all undercoated, Installer supplies all caulking, undercoating, and touch-up paint. Apply a 3/16" bead of caulking along the wing or flange of the Conveyors from front to rear then lay the floorboard down. Also apply caulking around the Pallet Stops and Run Out Channels to prevent.

DO NOT - Apply caulking to the top plates. See Figure 4-10.

After the floorboards are in place and screwed down to each cross member, apply undercoating to the entire bottom of the vehicle. Provide protection to the Control Box and Air Tanks prior to undercoating application.

Figure 4-10 Caulking Application



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Chapter 5 Inspecting for Proper Installation and Operation

5.1 Recommended Inspections

This chapter contains inspections for leaks, lane control, clearances, and attachment. To protect coverage under the Warranty, consult Ancra Customer Service before repairing or replacing a defective component.

5.2 Warnings

The following Warnings apply when operating the Retract-A-Roll®II system:



Set parking brake before actuating system



Vehicle must be level to prevent uncontrolled cargo movement when rollers are raised.



Do not drive or operate forklift or similar equipment on rollers in the raised position



Close and secure lid of Control Box before moving vehicle.



Do not walk on rollers when in the raised position.



Use only main control valve (joystick) to raise and lower roller system.



Lower rollers before moving vehicle.

5.3 Inspecting for Leaks

Ancra requires the Installer to perform a Leak Test. An example is provided below. Begin with the Supply system Leak Check.

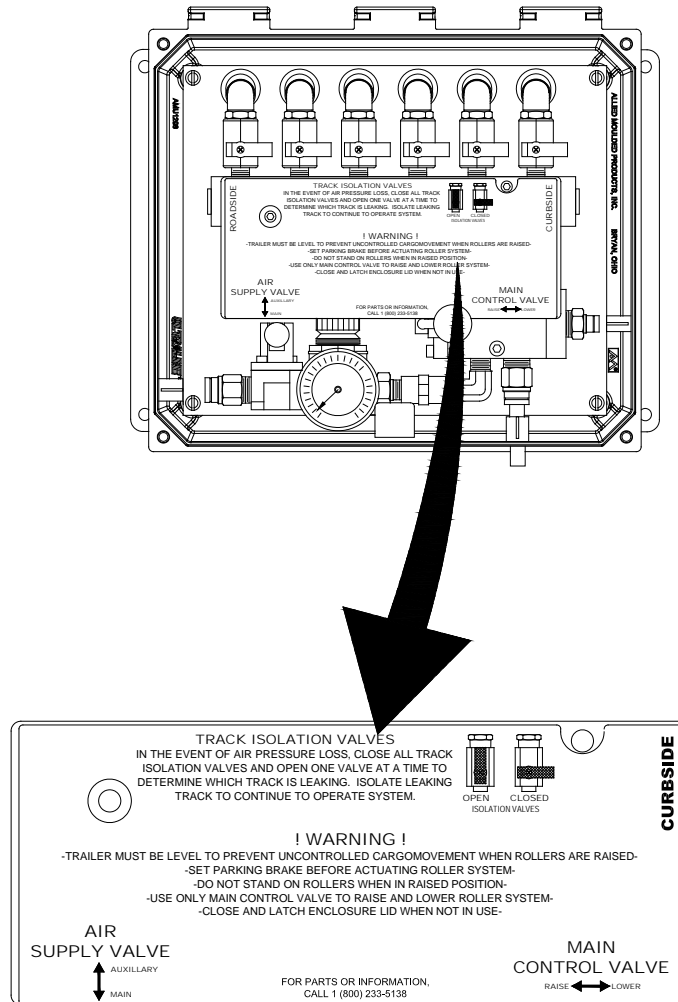
5.3.1 Supply System Leak Check

Before Tractor/Vehicle hook up:

1. Make sure that the main control valve on the Control Panel is to the **RIGHT SIDE** or lowered (off) position. See Figure 5-1.
2. Make sure that the track isolation valves are **OPEN**. Valve operation is also shown in Figure 5-1.

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Figure 5-1 – Operating Track Isolation Valves



3. Attach air compressor to the auxiliary air inlet on the Control Panel. Fill Air Tanks to 100 ± 5 psi. The inlet is shown on Figure 4-5.
4. Attach a hand-held gauge to the auxiliary air inlet on the Control Panel. The gauge must be rated to at least 160 psi with gradients of 1 psi. The installer provides the gauge.
5. A pressure differential of 10% or less in a 12-hour period is acceptable, check block in Ancra Warranty Registration and proceed to RAR System Leak Check.
6. If greater than 10% factor, isolate, fix leak, and repeat Supply System Leak Check.

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NOTE: The subject duration of the test is solely dependent on the accuracy of the test equipment. The pressure loss must be equivalent of a 10% loss or less over a 12-hour period. For example, a 1-hour test at 30 psi would require a loss of .25 psi or less.

5.3.2 RAR System Leak Check

1. Inflate roller system by moving the main control valve to the **LEFT SIDE** or raised (on) position.
2. Look inside vehicle. Inspect that all rollers raised to approximately ½" above the top plates / floor.
3. Drain both air tanks by pulling drain valves at the bottom of the Air Tanks.
4. Check that pressure gauge within the Control Panel reads 30 ± 5 psi. Monitor the pressure gauge at 12-hours and note any pressure drop.
5. For a pressure drop less than 10%, perform Emergency System Shutoff Check.
6. For a pressure drop greater than 10%, perform Conveyor Lane Leak Check.

5.3.3 Conveyor Lane Leak Check

1. Move the main control valve to the **RIGHT SIDE** or lowered (off) position. This exhausts air from all lanes.
2. Fill Air Tanks using an air compressor attached to the auxiliary inlet on the Control Panel.
3. Isolate Conveyor Lane 1 by turning the track isolation valve (on the Control Panel) for Lane 1 to the **OPEN** position and turning the track isolation valves for Lanes 2 through 6 to the **CLOSED** position. This exhausts air from Lanes 2 through 6.
4. Move the main control valve to the **LEFT SIDE** or raised (on) position and DRAIN the Air Tanks by pulling the drain control valves at the bottom of the Air Tanks.
5. Monitor air pressure on the regulated pressure gauge within the Control Panel for 15 minutes and note any pressure drop.
6. If pressure continues to drop, check all connections between the track isolation valve for Lane 1 and air bag assemblies in the Conveyors using soapy spray water or leak detecting solution.
7. If no air pressure drop is noted in Conveyor Lane 1, continue Lane Isolation Leak Check for remaining individual lanes. Make adjustments and replace defective components as necessary.
8. Once all individual lanes are complete, repeat RAR System Leak Check.

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5.3.4 Emergency System Shutoff Check

1. Make sure that all track isolation valves are **OPEN**.
2. Hook up the Tractor air brake system to the Vehicle. Allow the Air Tanks to fill.
3. Set the parking brake within the tractor cab to simulate that the vehicle is parked.
4. On the Control Panel, move the main control valve to the **LEFT SIDE** or raised (on) position.
5. Look inside the vehicle. Inspect that all rollers rise to approximately ½” above the floor.
6. Release the parking brake within the vehicle cab to simulate that the vehicle is moving.
7. Look inside the vehicle. Inspect that all rollers retract below the floor.

5.4 Inspecting Lane Control

This inspection makes sure that each track isolation valve on the Control Panel is attached to the proper Conveyor Lane inside the vehicle. Proper lane control is shown in Figure 4-4. Remember that normal assignments are from left to right for both the Control Box isolation valves and Conveyor Lanes, from left to right 1, 2, 3, 4, 5, and 6.

Perform the Leak Test before performing this test.

1. Turn Lane 1 track isolation valve on the Control Panel to the **OPEN** position, all others **CLOSED**.
2. Move the main control valve to the **LEFT SIDE** or raised (on) position.
3. Inspect inside the vehicle to make sure that Lane 1 is inflated.
4. Continue with Lanes 2 through 6.

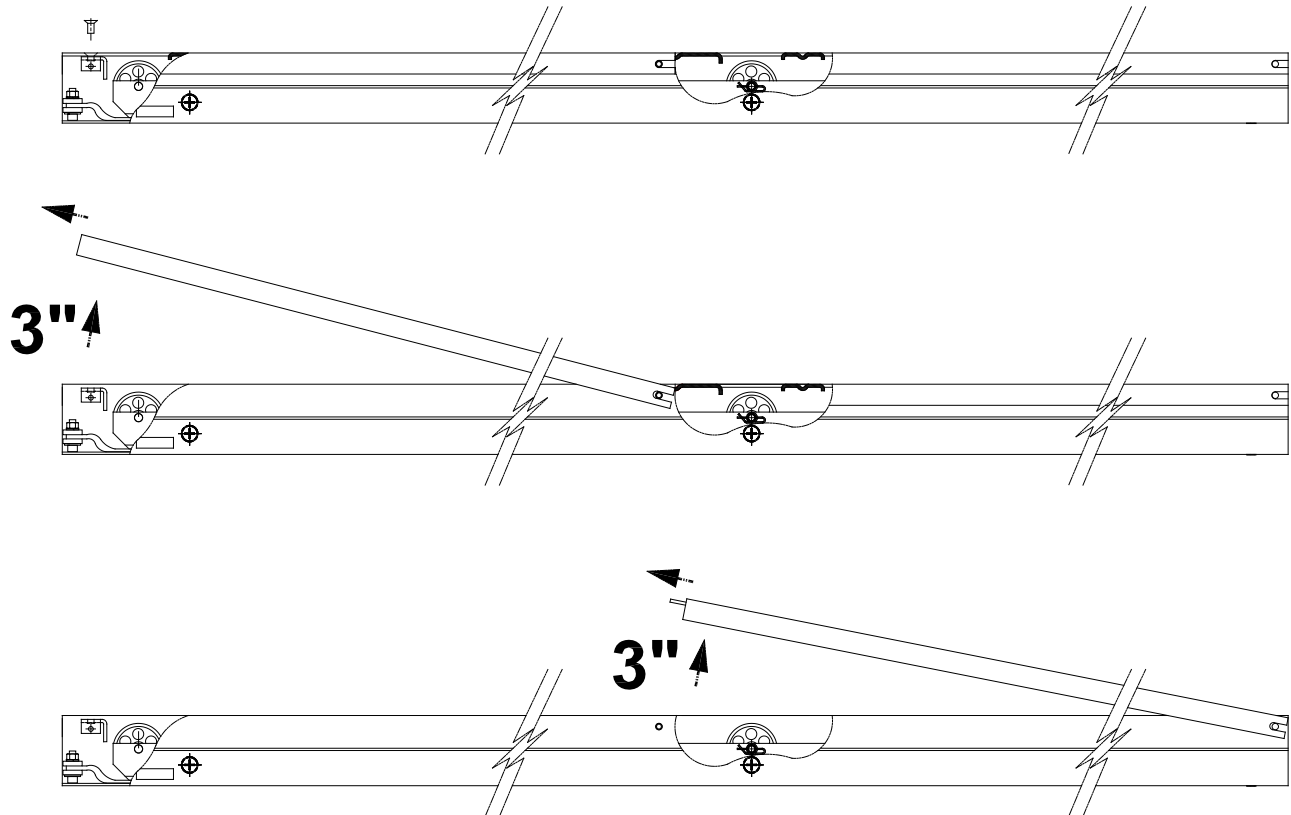
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5.5 Cover Plate Removal

Should the need arise to remove the Cover Plates to verify the air bag connection, please refer to Figure 5-2 for the proper instructions. Damage may occur by too much lift.

1. Remove two (2) flat head screws from the screw end Cover Plate. (Fig. 5-2 Top)
2. Lift screw end Cover Plate (**Approx. 3"**) and pull back to free it from the retaining pin at the middle of the conveyor assembly. (Fig. 5-2 Center)
3. Lift tab end Cover Plate (**Approx. 3"**) and pull back to free it from the retaining pin at the far end of the conveyor assembly. (Fig. 5-2 Bottom)

Figure 5-2 – Cover Plate Removal



5.6 Cover Plates Reinstall

Reverse the Removal process. Make sure each top plate is properly seated on retaining pins, and make sure tab end on rear plate is under the front plate after installation. Tighten the Cover Plate screws to 50-70 in/lbs.

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NOTE: The Cover Plates have a slight camber to improve installed strength. It may be necessary to depress the top surface during installation.

5.7 Inspecting System Clearances

Make sure that the conveyors are installed within the proper clearances. Table 5-1 covers the areas to inspect. Refer to details in Figure 3-3, Figure 3-5, and Figure 3-7. Refer also to instructions in Chapters 3 and 4.

Table 5-1 – Condensed Inspection -- Clearances

✓ **Recommended Areas to Inspect**

-
- Floor is level.
-
- Floorboards and sub-floor build-up are not lower than $2 \frac{3}{4}$ " (+ $\frac{3}{32}$ "), measuring from top of structural cross member to top of roller in the down position.
-
- Conveyor Lanes are properly spaced. Center of each lane is aligned with vehicle centerline.
-
- Proper clearances are present around Run Out Channels.
-
- Proper clearances are around edges of Conveyors for cover plates to pivot and floor boards to flex.
-
- Air tubing and fittings are not so tightly pulled that connectors may disconnect. No kinks or sharp bends are present in the tubing.
-
- Long segments of tubing are bracketed to vehicle.
-

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5.8 Inspecting System Attachment

Table 5-2 below, covers the highlights. Refer to instructions in Chapters 3 and 4.

Table 5-2 – Condensed Inspection -- Attachment

✓ **Recommended Areas to Inspect**

- Conveyors are attached (3) times per side (each end and center).
- Both ends of every Conveyor have bridge plates or structural support.
- Maximum of 12" between structural cross members, center-to-center.
- Control Box and Air Tanks are securely attached to vehicle cross members.
- All visible valves, fittings, and air tubing are in order.
- System is securely attached to the Vehicle's air supply.
- Warning Decals (47082-10 and -11) are securely installed on the sidewall near the tailgate, approximately 5' above the vehicle floor.



Your Retract-A-Roll®II system is installed. Please complete and return the Warranty Registration Form immediately.

Refer to the Operations and Maintenance Manual for tips on using and maintaining the system.

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Chapter 6 Illustrated Parts List for Installation

NOTE: The parts lists in this Installation Guide cover only the information required to install components. If you require detailed parts, refer to the Operations and Maintenance Manual.

NOTE: Parts lists are provided for part identification and system arrangement only.

Identify the item number assigned to the illustrated part. Locate the item number in the parts list for descriptions.

Quantities specified in the quantity column are the total number of each part required in the assembly defined in that parts list only.

For example, the quantities in the Air Tank parts list (Figure 6-3) are for one Air Tank Kit. The Retract-A-Roll II System layout (Figure 6-2) references the system parts list (Table 6-2). The system parts list requires two (2) Air Tanks.

Parenthesis note quantities if system is supplied with one air tank in lieu of two.

The Conveyor Channel Assemblies and System Control Kit are provided without attaching fasteners; therefore they are not listed separately, installer provides attaching fasteners.

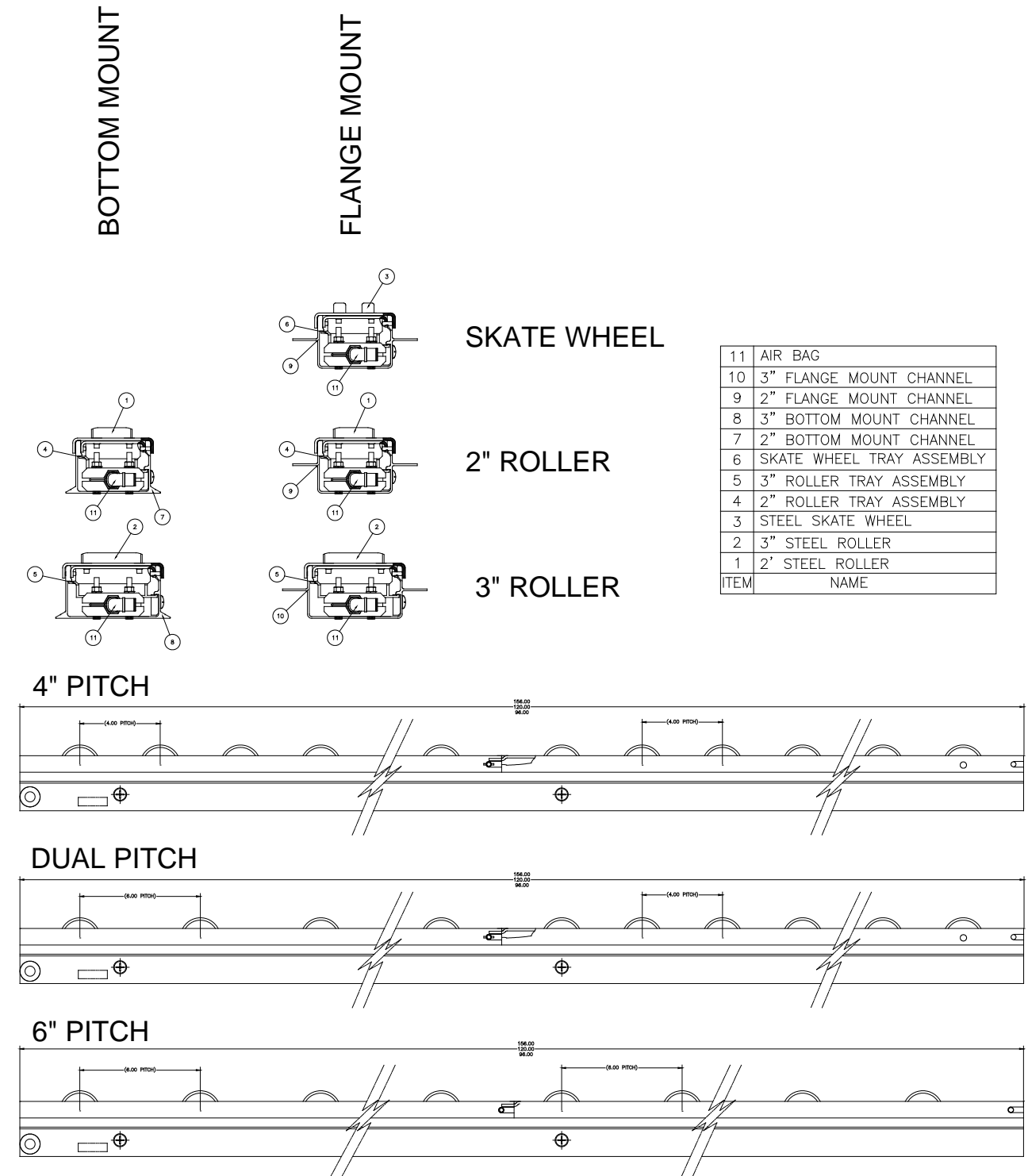
Turn to the installation instructions in Chapters 3 and 4 for more information.

Ancra Customer Service is available for ordering parts and answering your questions about Retract-A-Roll®II. Call us toll-free at (800) 233-5138 or locally at (859) 371-7272. Fax (800) 347-2627.

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6.1 RAR II Conveyor, 65022 & 62022

Figure 6-1 – Conveyor



11	AIR BAG
10	3" FLANGE MOUNT CHANNEL
9	2" FLANGE MOUNT CHANNEL
8	3" BOTTOM MOUNT CHANNEL
7	2" BOTTOM MOUNT CHANNEL
6	SKATE WHEEL TRAY ASSEMBLY
5	3" ROLLER TRAY ASSEMBLY
4	2" ROLLER TRAY ASSEMBLY
3	STEEL SKATE WHEEL
2	3" STEEL ROLLER
1	2' STEEL ROLLER
ITEM	NAME

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Ancra Retract-A-Roll® II Installation Manual - 62040-10, Rev. H

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Table 6-1 – Conveyor

65022 SKATE WHEEL CONVEYOR

DASH NO	LENGTH (FT)	ROLLER TYPE	MOUNT STYLE	ROLLER PITCH	AIR FTG. ATTACH	ROLLER MATERIAL
-20	13'	SKATE	WING	6"	STANDARD	STEEL
-21	13'	SKATE	WING	COMBO	STANDARD	STEEL
-22	8'	SKATE	WING	6"	STANDARD	STEEL

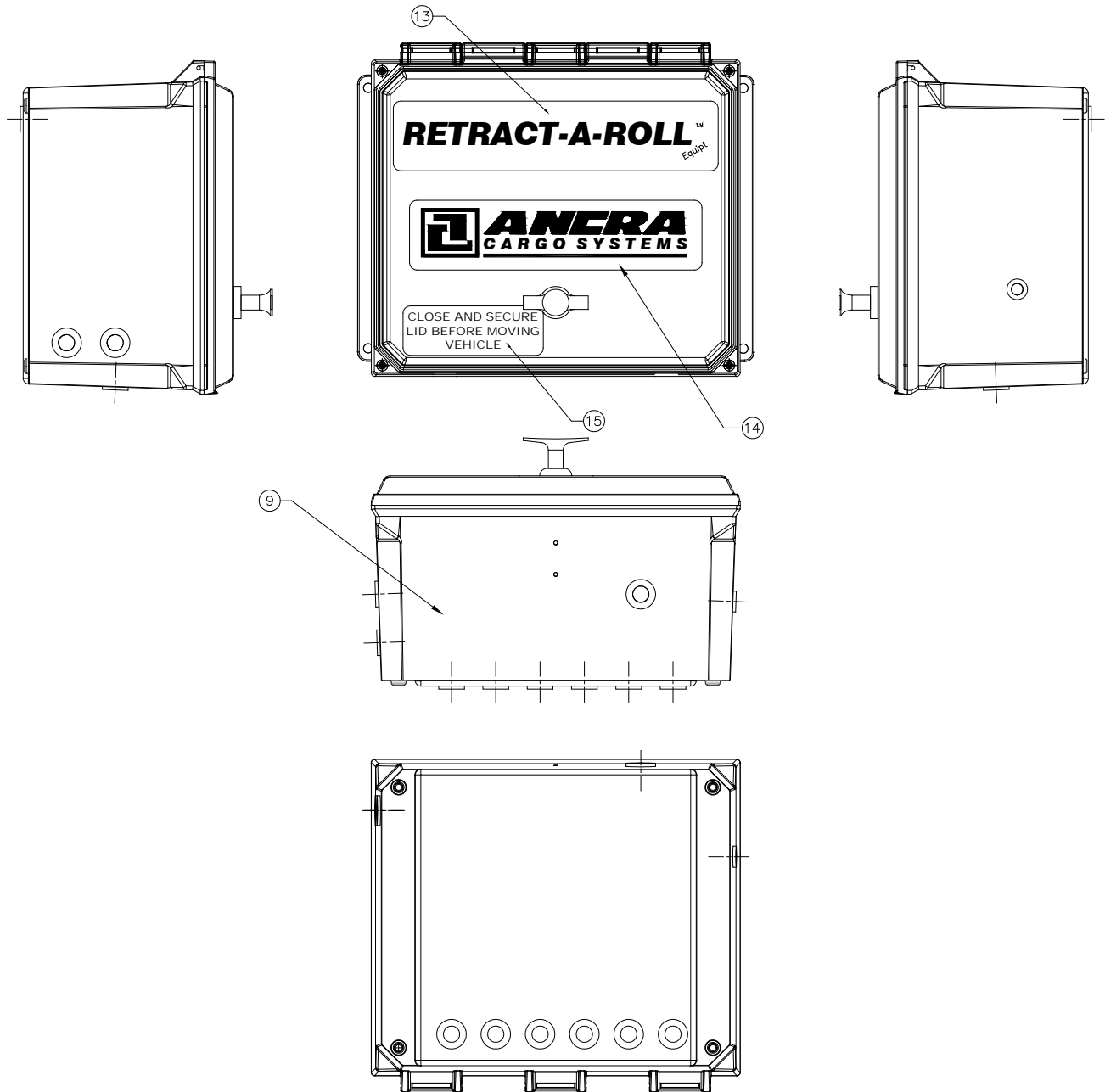
62022 ROLLER CONVEYOR

DASH NO	LENGTH (FT)	ROLLER WIDTH	MOUNT STYLE	ROLLER PITCH	AIR FTG. ATTACH	ROLLER MATERIAL	SHEET #
-20	13'	2"	WING	6"	STANDARD	STEEL	2
-21	13'	2"	WING	COMBO	STANDARD	STEEL	3
-22	8'	2"	WING	6"	STANDARD	STEEL	2
-23	10'	2"	WING	6"	STANDARD	STEEL	2
-24	13'	2"	WING	4"	STANDARD	STEEL	4
-25	8'	2"	WING	4"	STANDARD	STEEL	4
-26	10'	2"	WING	4"	STANDARD	STEEL	4
-34	13'	3"	WING	4"	STANDARD	STEEL	5
-35	8'	3"	WING	4"	STANDARD	STEEL	5
-36	10'	3"	WING	4"	STANDARD	STEEL	5
-120	13'	2"	BOTTOM	6"	STANDARD	STEEL	2
-122	8'	2"	BOTTOM	6"	STANDARD	STEEL	2
-123	10'	2"	BOTTOM	6"	STANDARD	STEEL	2
-124	13'	2"	BOTTOM	4"	STANDARD	STEEL	4
-125	8'	2"	BOTTOM	4"	STANDARD	STEEL	4
-126	10'	2"	BOTTOM	4"	STANDARD	STEEL	4
-134	13'	3"	BOTTOM	4"	STANDARD	STEEL	5
-135	8'	3"	BOTTOM	4"	STANDARD	STEEL	5
-136	10'	3"	BOTTOM	4"	STANDARD	STEEL	5
-137	12'	3"	BOTTOM	4"	STANDARD	STEEL	5
-210	13'	2"	WING	COMBO	REVERSED	STEEL	7
-211	13'	2"	BOTTOM	COMBO	REVERSED	STEEL	7
-230	13'	3"	WING	4"	REVERSED	STEEL	8
-231	13'	3"	BOTTOM	4"	REVERSED	STEEL	8

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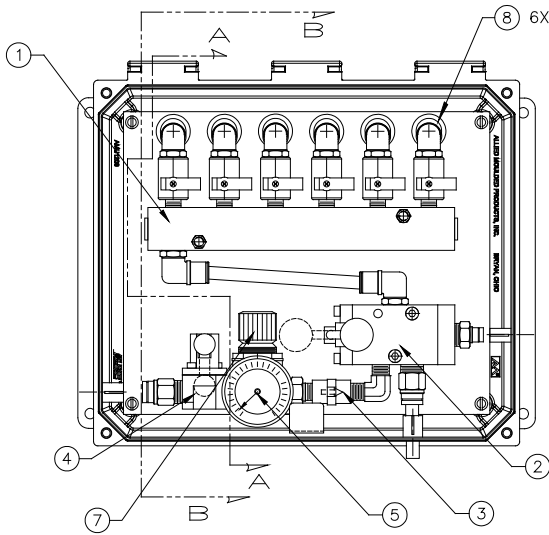
6.2 RAR II Control Box, 62011-13

Figure 6-2a – Control Box - Exterior

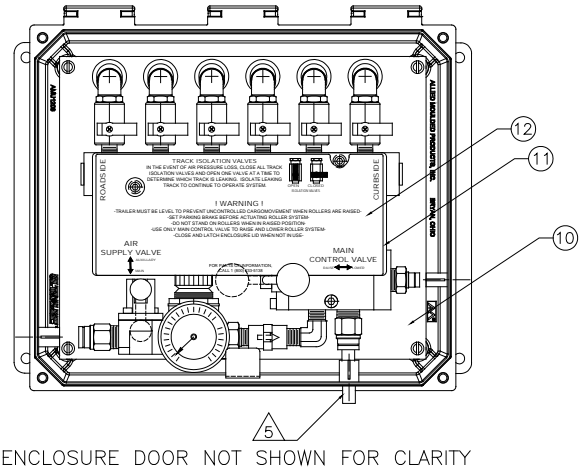


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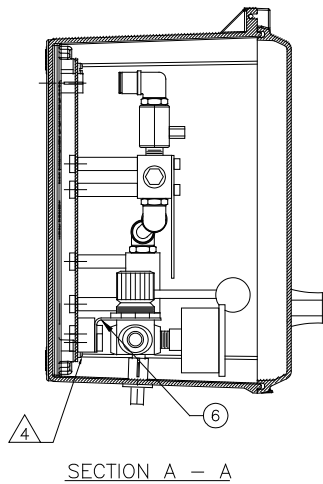
Figure 6-2b – Control Box - Interior



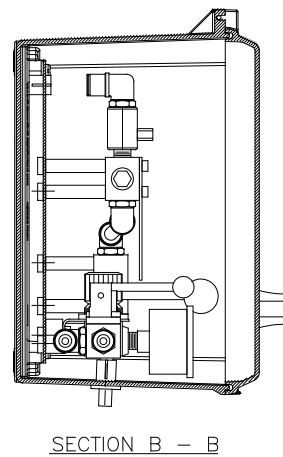
COVER PLATE (ITEM 10) AND ENCLOSURE DOOR NOT SHOWN FOR CLARITY



ENCLOSURE DOOR NOT SHOWN FOR CLARITY



SECTION A - A



SECTION B - B

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Table 6-2 – Control Box, 62011-13

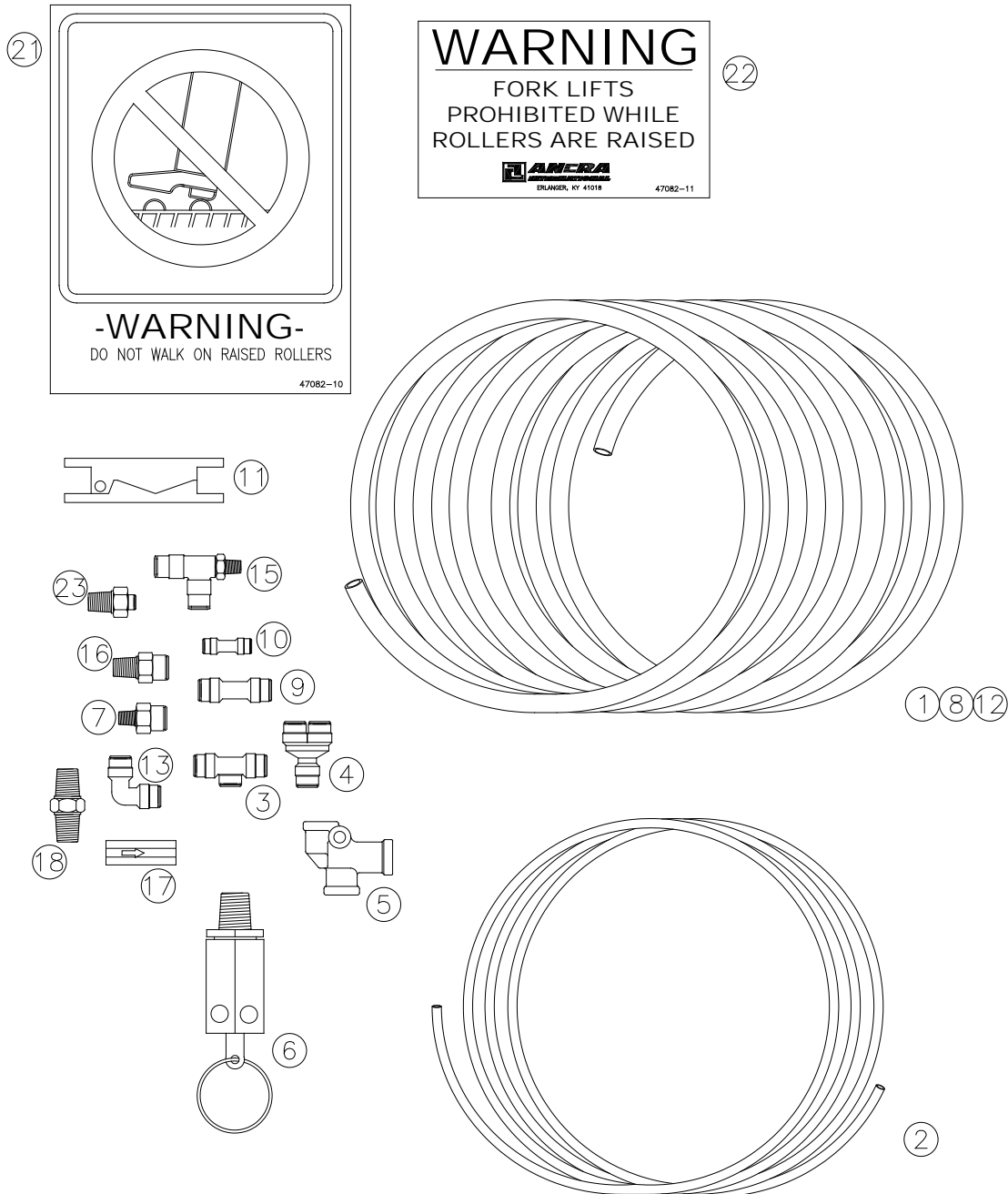
62011-13 CONTROL BOX

1	15	62069-10	DECAL, WARNING		
1	14	62038-10	DECAL, ANCRA		
1	13	47805-10	DECAL, RAR		
1	12	AIR SUPPLY DECAL	FRONT PANEL DECAL		CORNERSTONE
1	11	PA120S05	BACK PANEL		ALLIED
1	10	PA108S04	FRONT PANEL		ALLIED
1	9	AMU1206S014	ENCLOSURE		ALLIED
6	8	MV608-4	MINI VALVE		PARKER
1	7	R07-200-RNKA	REGULATOR		NORGREN
1	6	18-025-003	GAUGE MTG BRKT		NORGREN
1	5	T6-E-L-1/8	PRESSURE GAUGE		MCDANIEL
1	4	1113A-021	SMALL 3-WAY VALVE		MAC
1	3	CMM20B	CHECK VALVE		DELTROL
1	2	E25LP	3-WAY VALVE		ARO
1	1	AHP-72007-A	MANIFOLD		ALUMI-TEC
	ITEM	PART NO.	NOMENCLATURE	STOCK SIZE	MATERIAL SPEC/SOURCE

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6.3 RAR II Fittings Kits, 62023

Figure 6-3 – Fittings Kit



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Table 6-3 – Fittings Kits, 62023

62023 CONNECTION KIT DEFINITIONS

DASH NUMBER	AIR TANK KITS	NUMBER OF LANES	CONVEYORS/LANE
-10	2	6	2
-13	1	6	2
-14	1	4	2
-30	2	2	4
-41	2	6	4
-42	2	4	4
-45	2	4	5
-46	3	6	4
-47	3	4	4
-48	1	6	4
-49	2	6	4
-50	3	6	4
-51	2	5	4
-52	3	6	4

62023 CONNECTION KIT CONTENTS

1	-	-	-	-	-	--	-	-	-	-	-	-	-	24	47049-10	TUBING	1/4 X 30 FT	NYLON
3	2	3	2	1	3	3	2	2	2	2	1	1	2	23	60169-10	AIR TANK KIT		
8	10	8	10	10	11	8	8	8	8	9	7	7	7	22	8X10D	POLY BAG		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	47061-12	ADAPTER, PIPE TO TUBE	3/8 NPT X 1/4 TUBE	
1	1	1	1	1	1	1	1	1	1	1	1	1	1	20	47082-11	WARNING DECAL, NO DRIVE		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	19	47082-10	WARNING DECAL, NO STEP		
-	-	-	-	-	-	-	-	-	-	-	1	-	-	18	5203K26	MANIFOLD, SWIVEL		
-	2	-	2	2	2	-	-	-	-	-	-	-	-	17	47051-13	NIPPLE, HEX	1/4 NPT TO 3/8 NPT	
2	-	2	-	-	2	2	-	-	-	-	-	-	-	16	47046-12	VALVE, CHECK		
4	4	4	4	4	4	4	4	4	4	-	2	2	4	15	47061-14	ADAPTER, PIPE TO TUBE	3/8 NPT TO 3/8 TUBE	
-	-	-	-	-	-	-	-	-	-	-	1	-	-	14	48951-10	TEE, MALE		
1	-	-	-	-	-	-	-	-	-	-	-	-	-	13	47049-11	TUBING	Ø3/8 X 300 FT	NYLON
-	1	-	1	1	1	1	1	-	1	-	-	-	-	12	47049-11	TUBING	Ø3/8 X 220 FT	NYLON
1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	47056-10	TUBE CUTTER		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	62034-11	FITTING, TUBE TO TUBE, 1/4		
-	2	-	2	2	2	-	1	1	1	1	1	1	1	9	62034-10	FITTING, TUBE TO TUBE, 3/8		
-	-	-	-	-	-	-	-	1	-	-	-	-	-	8	47049-11	TUBING	Ø3/8 X 200 FT	NYLON
3	3	3	3	3	3	3	1	1	1	3	1	1	1	7	47061-13	ADAPTER, PIPE TO TUBE	1/4 NPT TO 3/8 TUBE	
3	2	3	2	1	3	3	-	-	-	-	-	-	-	6	47230-10	VALVE, DRAIN AIR TANK		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	47058-13	VALVE, PRES. PROTECTION		
-	1	-	-	-	-	-	-	-	-	-	-	-	-	4	47049-11	TUBING	Ø3/8 X 185 FT	NYLON
20	15	19	19	19	19	19	16	12	18	10	4	6	6	3	47065-10	FITTING, TEE TUBE		
-	1	1	1	1	1	1	1	1	1	1	1	1	1	2	47049-10	TUBING	Ø1/4 X 5FT	NYLON
-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	47049-11	TUBING	Ø3/8 X 100 FT	NYLON
-52	-51	-50	-49	-48	-47	-46	-45	-42	-41	-30	-14	-13	-10	ITEM	PART NO.	NOMENCLATURE	STOCK SIZE	MATERIAL

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6.4 RAR II Air Tank Kit, PN#60169-10

Figure 6-4 – Air Tank Kit

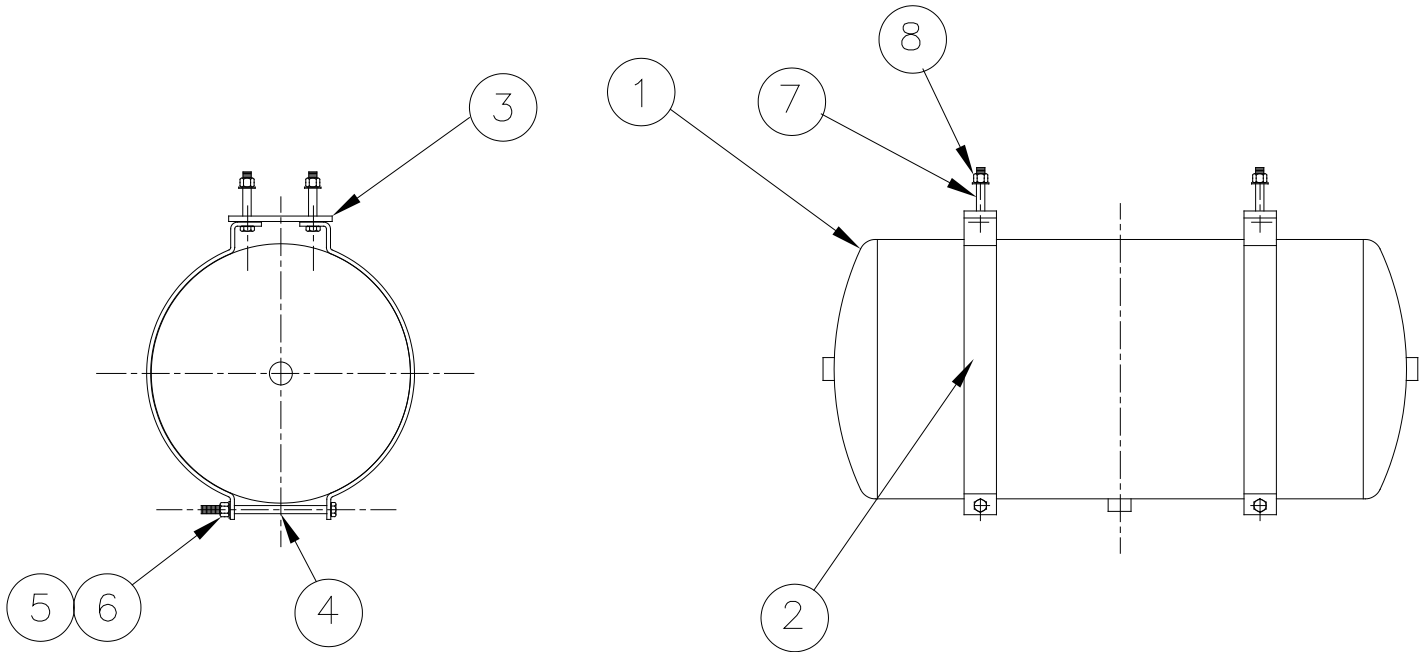


Table 6-4 – Parts List for Air Tank Kit, 60169-10

60169-10 AIR TANK KIT

1	9	8X10D	POLY BAG	8" x 10"		
2	8	1343CAC1200	HEX NUT	3/8-16	GRADE#8	
2	7	1415FAC1200	LOCK WASHER	3/8"	GRADE#8	
2	6	1118CAC1292	BOLT	3/8-16 x 6"	GRADE#8	
1	5	60169-01	PACKING BOX	27"X 12.5"X 13.5"		
4	4	98233A300	NUT, HEX, FLANGED	3/8-16	GRADE#8	McMASTER-CARR OR EQUIVALENT
4	3	1118CAC1220	BOLT	3/8-16 x 1.25"	GRADE#8	
4	2	60342-11	TANK MOUNTING BRACKET			HOOSIER P/N# BR-1049
1	1	47048-12	AIR TANK	12 GAL.CAP.	13g STEEL	HOOSIER P/N# HT-12174
-10	ITEM	PART NO.	NOMENCLATURE	STOCK SIZE	MATERIAL	MATERIAL SPEC/SOURCE

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Notes

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Notes

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Additional Information Resources

- Vehicle/Trailer Floor Assembly Drawings (from vehicle/trailer manufacturer)
- Ancra International Customer Service:
 - Toll-free (800) 233-5138
 - Local (859) 371-7272
 - FAX (800) 347-2627
- Retract-A-Roll® II Warranty Registration (62081-10) – Ancra website
- Ancra Operations and Maintenance Manual (Doc #310) – Ancra website



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